


# HARVARD MEDICAL

ALUMNI BULLETIN

SPRING 1989



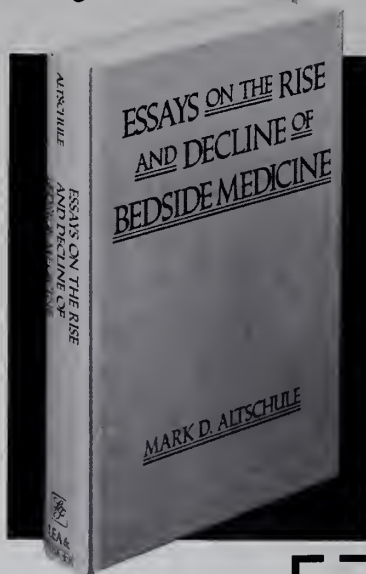
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# INSIDE H.M.A.B.

**H**arvard physicians have gone to great heights in pursuit of fitness and adventure. In this issue—devoted to sports, sports medicine and fitness—three alumni relate their mountain adventures: Ben Eiseman '43A, Geoff Tabin '84 and Joan Lamb Ulliyot '66.

H.L. Mencken once said: "Whenever I feel the urge to exercise, I lie down for a while until the feeling leaves me." Harvey Simon '67 describes how he left his sedentary lifestyle in the dust 23 years ago when he took up running. Now Simon encourages other physicians to exercise regularly and preach what they practice.

Lyle Micheli '66, physician for the Boston Ballet, depicts the special medical attention needed by dancers, for whom the show must go on. Sarah Nelson of our staff profiles Bill Southmayd '68, once a Harvard College football captain, team doc for the Red Sox, and now an entrepreneur with seven sports medicine clinics.

Arthur J. Barsky, HMS psychiatrist, argues that the quest for a healthy lifestyle has become excessive. He reminds us that good health and fitness help us live a fulfilled and complete life, but don't substitute for one. Athletics took on a larger cultural meaning in Victorian England, starting in the 1850s. A lecture to American teachers in 1830 illustrates that, in some ways at least, John Collins Warren was ahead of his time in insisting on "the importance of physical education."

Medical historian Allan Brandt points out—in an interview with *HMAB's* Debra Trione—that concern about cigarette smoking was a forerunner of the health consciousness that evolved in the '70s and '80s. And plastic surgeon John Mulliken sensitively portrays how a facial birthmark affected the life of someone whom many think is Harvard's greatest president, Charles William Eliot.

—Ellen Barlow

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# LETTERS

## On Professional Pride

### ODE TO HARVEY KLEIN (AND THE COHORT OF OVER-50 HARVARD INTERNISTS)

In Boston's sometime sunny clime  
Where we once spent youthful time  
To learn to care and tend to the afflicted  
that stellar teaching crew  
taught us not just what to do  
But to a Brahmin noblesse oblige got  
us addicted.

Till now Harvard internists of middle  
age  
Have lacked a voice and sage  
As we contemplate our lost prestige  
and money  
unloved by all but Hsiao  
we would sink to a mood most blau  
Had HMS not also taught us to be  
funny.

So here's to Klein, Klein, Klein  
Oh, your wit surpasses mine  
Come join the laughter when it hurts  
too much to cry  
we'll be stuck with liability  
and Medicare's endless imbecility  
Till we meet the great Health Care  
Provider in the sky.

—James S. Bernstein '52

Sincere congratulations on the latest  
*Bulletin*.

I was immediately curious to find  
out what Pete Churchill had to say!  
And as I turned the pages, I discovered  
that other authors had also felt the need  
for a revival of spiritual motivation in  
medical care. This was manifest in the  
history of the Channing Home and in  
Dr. Groopman's sensitive experience  
with AIDS. Of course Peabody also  
said it simply and clearly half a cen-  
tury ago.

Your managing editor, Ellen Barlow,  
has admirably reviewed the pressures  
of the modern work schedule and pos-  
sible means of relief for medical resi-  
dents. What is it that makes surgical  
care less burdensome for its resident

trainees despite their equal, or perhaps  
greater, personal involvement? Sam  
Martin once told me that he valued  
medical residency as an intellectual  
experience because deciding what to  
do next is usually so thought demanding.

There is no doubt in my mind that  
the medical/surgical profession is the  
finest in terms of *potential* human ben-  
efit to patients and satisfaction for prac-  
titioners. But times have changed in the  
operational environment and access to  
professional membership has become  
much more difficult. I respect the opti-  
mistic views of Carola Eisenberg, your-  
self and others. On the other hand, the  
expectations of the applicants to medi-  
cal schools, which are prospective and  
not retrospective, seem to include a  
different appraisal; a decade ago they  
numbered about 46,000, but today  
28,000. If this is to a large extent a  
matter of the financial burden involved  
in training, a society that wants doctors  
had better do something about it.

—William B. Castle '21

I really enjoyed Dr. Bennett's "Thoughts  
of an Aging Pediatrician." Whatever has  
come over our profession since the days  
of Francis Weld Peabody's *Care of the  
Patient*, when medicine was a privilege  
not a business?!

I enjoyed my practice days in Clarks-  
ville, Tennessee after World War II.  
Clarksville is just an hour away from  
Vanderbilt, and Dr. Tommy Frist. So I  
could be a country doctor and not prac-  
tice 'country' medicine.

—Edward P. Cutter '38

In the Winter 1989 edition of the *Bulle-  
tin*, Dr. J.W. Kennedy '33 writes: "I  
must be far over the hill, but Canin's  
'American Beauty', seven pages? Most  
of the death notices of non-academics  
get three or four lines. I suppose Canin  
needs a boost on his writing career."

In 1988 Mr. Canin was in the senior  
class at Harvard Medical School. At  
the moment, he is on leave of absence  
from medical school, and it is my under-  
standing that he will return to medical  
school to complete the requirements  
for his degree.

Dr. Kennedy is, indeed, over the  
hill when he supposes that the *Bulletin*  
published Canin's story because the  
author needed a boost in his writing  
career. From other more authoritative  
sources, a host of them, Canin has  
received many accolades for his liter-  
ary efforts. Of Canin's recent book,  
*Emperor of the Air*, the *New York  
Magazine* writes, "Full of surprises and  
unexpected flights." *The New York*






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*Times*, referring to the same book, comments, "Startling . . . these stories transcend the ordinariness of human voices." Of Canin's book and of the man the *Chicago Sun-Times* states, "Beautifully crafted . . . a writer of tremendous talent."

Canin's literary awards, from a variety of sources, are too numerous for me to mention. Canin has also been published twice in that venerable and superior magazine *The Atlantic Monthly*. I could go on and on.

I know Ethan Canin well; he and I were students at the Iowa Writer's Workshop in the 1980s. From that humble point in his learning Canin has risen to an exalted plane in the literary world. I can assure Dr. Kennedy that Canin's literary career is in need of no boost. I have the impression that Dr. Kennedy reads with an 'unappreciative eye'.

—J.A. FitzGerald '43A

## Editor's Note

*Nostra culpa. Sharp-eyed readers of our Fall issue were taken aback to find Brad Cannon, '33, using "I" instead of "me" after the preposition "with" in a letter to the editor. This glaring error occurred in a parenthetical statement that we added. All should know that we know that Brad Cannon knows the difference between me and I. Or should we say between the pronouns me and I—a small mountain or a large mole hill?*

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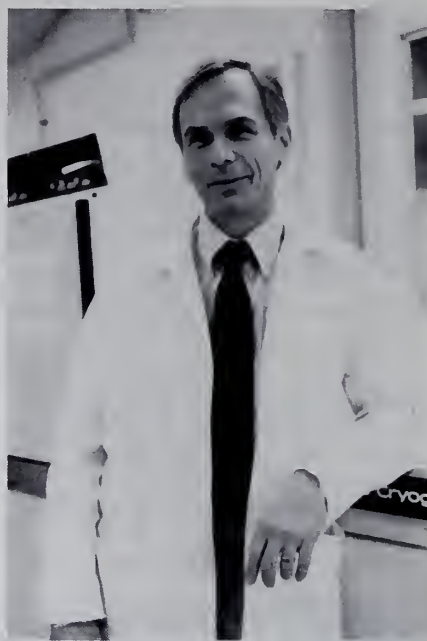
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# PULSE

## Elliot Kieff Named First Albee Professor

Elliot Kieff, an infectious disease specialist whose research interest is the herpes family of viruses, has been named the first Harriet Ryan Albee Professor of Medicine at HMS.

Formerly Louis Block Professor and chief of infectious disease at the University of Chicago, Kieff came to HMS in 1987. He is director of the infectious



Elliot Kieff

disease division at Brigham and Women's Hospital, and holds a joint appointment in the departments of medicine and of microbiology and molecular genetics at HMS. Kieff became interested in viruses while a medical student at Johns Hopkins. Since then he has concentrated on herpes simplex and Epstein-Barr (EBV). He continues to explore both clinical and genetic aspects of these and other viruses, focusing most

recently on how the B-lymphocytes are transformed after EBV infection.

The Harriet Ryan Albee professorship commemorates a leading social reformer of late 19th-century Boston. Having begun work as a hairdresser to wealthy Beacon Hill customers, Albee inspired her affluent patrons to help her found a home for tubercular women. In 1857 their donations enabled her to open the Channing Street Home, the first of its kind. For almost a century, the home grew in both size and reputation. It closed its doors in 1958 when tuberculosis ceased to pose a major health threat to Boston.

Much of the endowment from the Channing Home went towards the establishment of the Channing Laboratory for research on the etiology and epidemiology of other disease-causing microbes. A portion was also set aside for the Harriet Ryan Albee Fund, which has grown to the point where it can now fund a professorship.

According to Edward Kass, who recently retired after nearly 25 years as director of the Channing Laboratory: "Dr. Kieff's outstanding work in understanding the genetics and the nature of host response to Epstein-Barr virus is completely within the spirit of Harriet Ryan Albee's original intent." □

## Minority Faculty Representation

The Association of Black Faculty and Administrators at Harvard University, where the tenured faculty is only 1.8 percent minority, issued a report last October calling for a university-wide increase, to 10 percent by the year 1990, in minority representation on the faculty and administration. The medical school has had a better record on minority representation in both the student body and the faculty than the university average. But problems remain.

HMS has been twice as successful in attracting minority candidates for admission as the national average among

Clyde Evans, assistant dean for faculty affairs, notes that the school has recently redoubled its efforts to hold onto the minority faculty already at HMS. This is particularly necessary, he says, given the many factors working

Nationally the numbers of qualified and available minority faculty, says Evans, may be inflated and overly optimistic for Harvard. These statistics "count all prospective faculty at or just below the rank you're hoping to fill, even though it's very rare to recruit someone from the outside into a higher position at Harvard." He points also to the fact that "one quarter of the black faculty listed as available in the national pool are at one of the three predominantly black medical schools in this country, and may be wanting to stay there. So they're not really available to us."

Extreme specialization is another factor working against minority faculty recruitment. "If a department decides it wants a candidate specializing in the



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biomechanics of bone, there may not be many or any minority candidates that can even apply."

Amid discouraging talk of minority faculty recruitment, the dean recently announced a new program to help HMS advance the careers of minority faculty already here. Beginning this academic year, all department heads are now required by the school to hold an annual meeting with all minority (and female) junior faculty in their departments to discuss career advancement.

"The idea," says Evans, "is to provide an official opportunity for minority faculty to take stock of where they are, and in collaboration with department heads, to engage in career analysis and planning." After each meeting, the department heads are then required to submit a report to the dean.

Evans points out that the value of maintaining a healthy ratio of minority faculty goes far beyond the need to provide good role models for minority students. "My deepest feeling," he says, "is that ethnic and racial variety enriches the experience for all of us. People of other races or ethnic origins bring new perspectives and approaches to medical problem-solving, and to what it means to be a doctor. Without them, everyone is impoverished." □

The Class of 1989 plans to leave more than memories behind at commencement. As a class gift, they would like to establish an endowment fund to aid future HMS students in purchasing medical books. The fund would provide a small stipend for medical books, which now cost an average of \$100 each. It will benefit not only students of greatest financial need, but also students from middle-income families, according to Rich O'Donnell, who originated the idea for the fund. The director of financial aid will choose recipients.

Class members all plan to contribute to the fund, but because they need at least \$10,000 to make it an endowment fund, they are also turning to alumni for help. For more information, call Rich O'Donnell at 617/498-3680 or send contributions to the Harvard Medical School Class of '89 Gift Fund, 25 Shattuck St., Boston MA 02115. □

## A Closer Look

The public television series "NOVA" is taking an in-depth look at the medical education of six HMS students in its project "Can We Make a Better Doctor?" The project, now in its second year, will follow the students over 10 years, documenting key moments in their medical training. The first program,

which aired December 13, showed the students making their first incisions into the cadaver, and talking about their medical school experience. The *Boston Herald* called the program "an informative, ambitious series that should become more intriguing as the years pass." The curriculum changes recently implemented at HMS are now most decidedly in the public eye. □



The six HMS students whose training is being profiled by "NOVA." Above: David Friedman, Tom Tarter, Jane Liebschutz and Elliott Bennett-Guerrero.



Jay Bonnar



Cheryl Dorsey



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# CAMPAIGN REPORT

## Countway Library

The Francis A. Countway Library is still the largest university-centered medical library in the world, its collection second only to the National Medical Library in Bethesda. But it can no longer rest easily on its laurels. Because of lack of funds, there are significant gaps in Countway's collections, new acquisitions are lagging, books need preserving, journals are waiting to be bound, and some periodical subscriptions have been dropped.

One goal of the Campaign for the Third Century of Harvard Medicine is to raise \$3 million to bring Countway up to speed with the proliferation of medical information. Efforts are now under way to raise funds from the pre-clinical and clinical departments and their faculty, many of whom already have given generously to help rebuild collections in their fields of interest, according to Dorothy Newell, director of major gifts. There are named book fund opportunities to support the acquisition and preservation of printed materials, and a drive for \$1.5 million to endow a chair in librarian medicine.

If Countway had more money for acquisitions, says Mary Chatfield, who has been acting head librarian since July 1988, they would purchase more books on public health, community medicine, and health care delivery in deprived areas, for example. "Although money is certainly needed for preservation of archival material, we need to concentrate mainly on keeping up with contemporary material and today's technology," she says. "Ninety to 95 percent of Countway's users are students and practicing physicians who have a vital interest in staying up to date."

In the late 1960s, a literature search necessitated that a reference librarian send research questions to the National Library of Medicine, which would respond about a month later with a computerized bibliography. Now searches can be done immediately from a com-



puter terminal at Countway by using one of seven medical literature data bases.

With additional funds, Countway staff could bring current information to more people by purchasing a four-

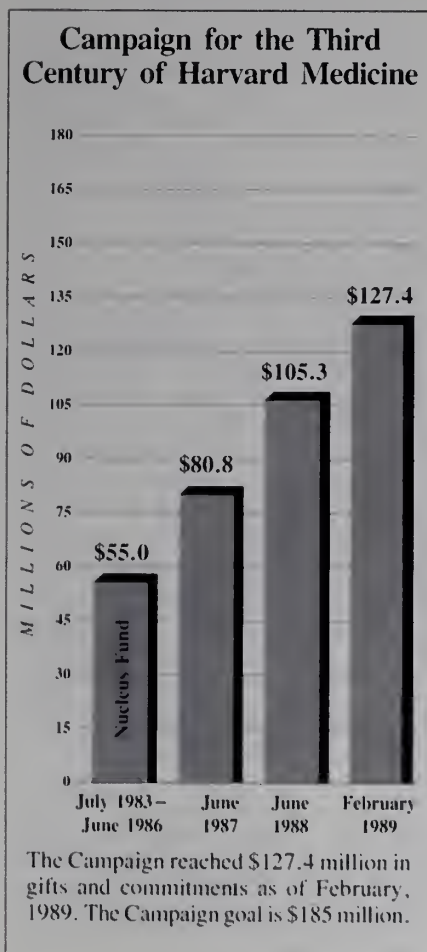
person computer work station and a small library of CD-ROMs. CD-ROM data bases provide access to vast amounts of data, most of it bibliographic or reference, without the costs and complications of online access. Two ver-



sions of MEDLINE are currently being tested, and the library would like to purchase other CD-ROMS, such as one dealing with AIDS and another with cancer.

Electronic storage and retrieval were barely imaginable in 1965 when the Boston Medical Library and Harvard Medical Library officially merged to form the Francis A. Countway Library. Boston Medical Library, founded in 1875 as a private physicians' library with Oliver Wendell Holmes as president, combined its 245,643 volumes with the 166,514 volumes in the Harvard Medical Library to compose a vast collection of medical literature.

The HMS Library was initiated in 1782 with plans to become "a collection more perfect than any in America, as soon as circumstances will permit." Sanda Countway (sister of Francis Countway), Harold Vanderbilt, and various other individuals and foundations provided the financial "circumstances" necessary to build Countway Library. It is now the hope of all concerned with Countway that favorable circumstances will continue to prevail during the current capital campaign. □



## BOOK MARKS

*PERFECTING THE WORLD: THE LIFE AND TIMES OF DOCTOR THOMAS HODGKIN.* by Amalie M. Kass and Edward H. Kass, Harcourt Brace Jovanovich, Inc., 1988

by Guillermo C. Sanchez

Thomas Hodgkin was born in 1798 in Pentonville near London, the third son of John Hodgkin, a calligrapher, and Elizabeth Rickman. The families on both sides had been Quakers for several generations. "Children of Light," they called themselves initially, and "The Society of the Friends of Truth." The followers and successors of George Fox later accepted the term Quaker, which their enemies had called them in derision because they bade their listeners to tremble at the word of God.

Theirs was a serious group, strict in morals and habits, simple in their curious dress, and interested in many important causes, including the avoidance of war, the liberation of slaves, and the freedom and dignity of oppressed peoples. All their strongly held beliefs were important guides throughout the life of Thomas Hodgkin.

Amalie and Edward Kass have written an extraordinarily scholarly life of Hodgkin, after careful study of much archival material in England and this

country. Not only do they cover his life in detail, but there are extended descriptions of topics relevant to it. The Quakers and their history and travails occupy many pages.

Some readers might have preferred a wider brush and possibly more emphasis on the England in which Hodgkin lived. The history of apothecaries is extensively described and the anti-slavery movement discussed in depth. Those interested in historical overviews of the political development of medical institutions, however, will find much to intrigue them in the narrative about Hodgkin's relations to Guy's and Thomas's hospitals. The medical reader will also find a scholarly analysis of Hodgkin's contributions to pathology; and those who care about curricular problems will find in Hodgkin's writings much that is still relevant.

Small of stature like his father—he apparently called himself a "homunculus" in a letter to his brother—Thomas Hodgkin was extraordinarily hard working, earnest and humorless. He had "a stiffness in his manners, which nettles us sometimes, in spite of our admiration," according to family friends who knew him in his student days. He himself recognized this problem; when referring to his prolonged celibacy, he admitted that "this must be owing to something defective or repulsive in myself."

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Since there were no Quaker schools accessible to the Hodgkin family, the parents decided to bring up their sons with the help of tutors of composition, mathematics, Greek and penmanship. Early on Thomas showed an interest in science, although this was not formally taught, and he particularly liked to experiment with an electrical machine. Like many other important Quakers before him, Thomas was encouraged to find a career as an apothecary, and only later did he turn to medicine.

Until the middle of the 19th century, only Anglicans could receive a degree from Oxford or Cambridge, since graduation required an oath of loyalty that other religious groups were unwilling or unable to swear. For this reason, young Thomas went to Edinburgh for his medical studies, after a lively year in Paris during which he made disastrous real estate investments that he continued to pursue for many years. A substantial inheritance from a relative allowed him some latitude in his studies and travels, but throughout his life he was frugal, never given to extravagance.

To earn a degree from Edinburgh he had to complete a dissertation, "De Absorbendi Functione," a study of digestion and absorption, which was well received. He subsequently returned to the Continent and to Paris in particular, to travel with a wealthy patient, Abraham Montefiore. The relationship with the patient and his wife was not a happy one, and he was dismissed. But for the rest of his life he maintained an intimate friendship with the patient's older brother, Moses, accompanying him on many of his journeys.

After nearly two years of travel, Hodgkin returned to London to engage in his full-time medical career. He was then 27. Guy's Hospital had split from St. Thomas's to form a new medical school, with which Hodgkin was connected for several years. The most pow-

erful person at Guy's was the treasurer, Benjamin Harrison, with whom Hodgkin later developed an increasingly pugnacious relationship. But in the early years, he was allowed to become "Inspector of the Dead and Curator of the Museum." In this capacity he made several of his most important contributions including, in 1832, "On Some Morbid Appearances of the Absorbent Glands and Spleen," the classic description of what was subsequently named Hodgkin's disease.

He wrote an important essay on medical education regarding curricular changes, studied cholera, and described agonal ulcers. His admirers considered him one of the "three great men of Guy's," the other two being Richard Bright and Thomas Addison. Although highly regarded in the profession, he was not a popular lecturer and furthermore disliked private practice, expressing a "paralyzing horror of prescribing for filthy lucre."

While pursuing his medical activities, he continued to be intensely involved in philanthropic causes, especially the protection of slaves and American Indians and other downtrodden peoples. His active membership in the Aborigines Protection Society did not endear him to many important members of the Establishment at Guy's, especially given the motto of the organization, "Ab Uno Sanguine" (For One Blood), a statement that could not but offend those actively interested in the pursuit of the empire. He objected to the activities of the Hudson Bay Company of which Benjamin Harrison was a director, and this may have been the single most important reason for his subsequent professional calamities.

Harrison was quoted as saying: "The Treasurer would have no officer of the hospital who drove about with a North American Indian." In 1837 when a post for assistant physician opened, Hodgkin fully expected to be promoted, but unfortunately he had alienated the men who were to make the final decision, Harrison in particular. After stormy discussions and correspondence, and when a colleague was promoted in his stead, Hodgkin resigned totally from Guy's in 1837.

He then devoted all his attention to his work at Thomas's. Here again he met another serious disappointment when he was dismissed from his academic position in 1843. In periods of great stress—and there were many for him—Thomas Hodgkin appeared to have had epileptic seizures, a condition that prevailed among other members of his family.

An indefatigable champion of causes he believed in, Hodgkin was active in establishing the University of London, an institution that could grant degrees to those excluded by Oxford and Cambridge. It was suggested that he would be an obvious candidate for a chair in its University College Hospital, but preferring not to suffer a further disappointment, he did not apply for the professorship.

He was important in founding a psychiatric hospital for Quakers in London and in 1840 was a defense witness for Edward Oxford, who was accused of attempting to murder Queen Victoria and her husband. The defense tried to prove that the accused was "morally insane." This was several years before the establishment of the McNaughton Rule, which to the present has defined the exact parameters of an acceptable verdict, "Not guilty for reason of insanity."

In spite of his many setbacks, Hodgkin acquired a national and international reputation. He was a member of innumerable societies including the Massachusetts Medical Society and the Philadelphia Academy of Natural Sciences. In his domestic affairs, Thomas Hodgkin also suffered many reverses. A lifelong attachment to his cousin, Sarah Godlee, never led to marriage because of the then Quaker prohibition of marriage between cousins. He hesitated to marry Sarah Bowditch, the widow of a friend, and late in life finally married a third Sarah, Sarah Scaife, also a widow with children, to whom he became very devoted and for whom he served a crucial role.

While his work against slavery and for the colonization of Africa by free-men was perhaps his single greatest interest, he also became a champion of the Jews in North Africa and the Near East. He made several trips with his friend and patron Moses Montefiore, while this eminent gentleman mediated to improve the conditions to which the Jews had been subjected in those areas.

While in Jaffa, Hodgkin became fatally ill, possibly from cholera, died and was buried there. His brother, John, chose as his epitaph the Latin inscription "Humani nihil a se alienum putabat," which Hodgkin had used in his thesis dedicated to von Humboldt: "Nothing of humanity was foreign to him." □

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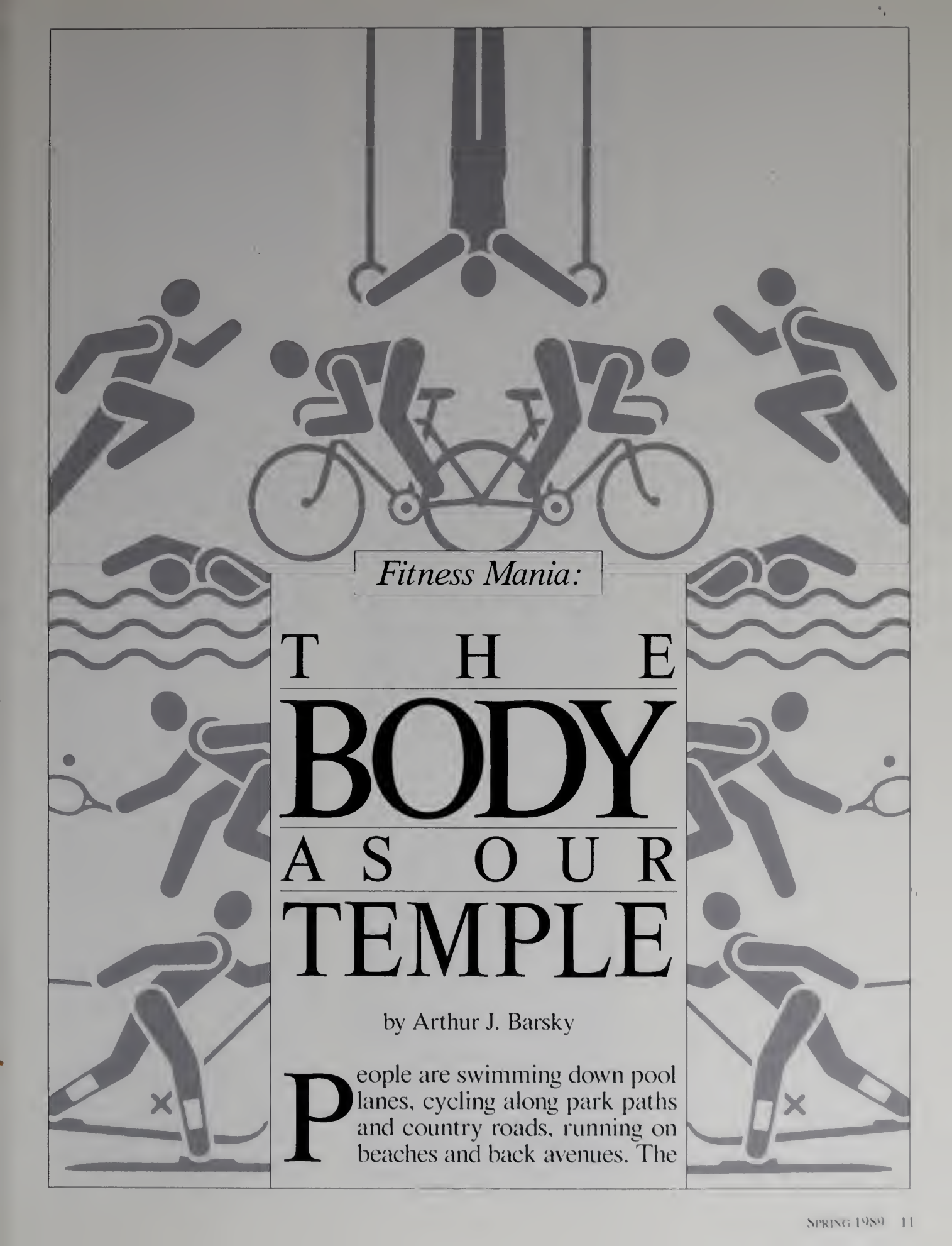
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*Fitness Mania:*

T H E  
**BODY**  
A S O U R  
TEMPLE

by Arthur J. Barsky

**P**eople are swimming down pool lanes, cycling along park paths and country roads, running on beaches and back avenues. The

*For many, the highest  
purpose of human  
activity is not to purify  
the soul, but to purify  
the body.*

streets are alive with the sound of pounding sneakers, with the grunts of weight training, and the hard-rock music of aerobics classes. Strength, endurance and fitness have become even closer to godliness than cleanliness. Health clubs are cathedrals built to sanctify the body; weight rooms and tracks have become our temples; athletic paraphernalia are our liturgical articles.

The exercise boom is widespread. While reliable data are difficult to obtain, there appear to be between 31 and 43 million serious joggers in the U.S., up from 12 million in 1976. Two hundred thirty-three individuals entered the New York City marathon in 1971; ten years later, there were 25,000 applicants for 16,000 places. More than 26 million people say they swim regularly, and an estimated 24 million, mostly women, regularly participate in aerobics classes. The fitness movement is especially striking among college women, who have shown new interest in vigorous and even violent sports such as weightlifting and rugby.

The urge to be fit is also an economic juggernaut. The sporting goods industry is \$12.3 billion strong, and its recent performance has been astonishing. Sales of exercise equipment increased 700 percent in the last decade. Athletic shoes alone are a \$2.5 to \$4 billion market, and although many people wear them around the house rather than on the track, the very ubiquity of sweats and jogging shoes shows just how fashionable exercise has become.

The fitness boom also fuels a lucrative market in exercise books, records and videotapes. Jane Fonda's *Workout Book*, for example, has sold 1.25 million copies and was number one on the best-seller list for a year. The latest status symbol is the home gym: increasing numbers of homeowners are investing tens of thousands of dollars to set up "fitness centers" in their own basements, complete with racks of dumbbells, arm-curling machines and stationary bicycles. Sears, Roebuck had one simple rowing machine in its catalogs of the 1920s, and now devotes 31 pages to fitness equipment.

How can we understand our rising fascination with physical conditioning? What personal and cultural meanings does it signify? And where will the exercise boom lead?

Several factors seem to be at work here. First, our fascination with physical conditioning has been fueled by a growing fixation upon the body as an object of great concern and lavish attention. In addition, we have become enthralled with exercise because it seems

to be a means of controlling our health and of fortifying ourselves against a rising tide of environmental health hazards. As a result, conditioning and fitness have come to signify far more than cardiovascular capacity and skeletal muscle tone. The act of exercising is felt to signify self-discipline and self-control, to forge character and be a means of personal and spiritual reform. Attaining a state of peak physical conditioning is thought tantamount to freedom from disease, longevity and moral virtue.

Because health has become synonymous with overall well being, it has become an end in itself—a paramount aim in life. Good health is no longer valued only because it is a means to other fundamental personal goals, such as professional accomplishment or raising a family. Rather, it substitutes for them. The quest for the healthy lifestyle, our pursuit of physical fitness, and our dieting all embody this view of health as an end in itself, an overarching priority of life, as a "supervalue" or "pan-value" as Robert Crawford has termed it.

Living a meaningful life has thus been reduced to a health problem. Health has become an imperative which, like a religious or moral code, dictates specific norms of conduct. We use health norms to judge how people should behave and how life should be lived; how we spend our income, what we read, how we sleep and work and play, what we eat and drink. As people in past epochs sought to lead a religious life, we now seek to lead a healthy life. We've replaced the religious quest for the salvation of our souls with the secular quest for the salvation of our bodies. Attaining a state of wellness is like attaining a state of grace. For many, the highest purpose of human activity is not to purify the soul, but to purify the body, and optimal physical health is now the object of conscious, sustained and deliberate endeavor.

Although the promise of optimal health is a major motivation behind our new-found devotion to exercise, conditioning is also pursued passionately because it seems to offer us a way of remodeling our bodies. Through exercise, diet and cosmetic surgery, we think it possible to transmute our physical appearance into the ideal physiognomy and physique. "Looking good" is indeed the adage of the 1980s. Americans are preoccupied with improving and transforming and perfecting the body, pumping it up and slimming it down, trimming



it off and shaping it up, preening it and caring for it.

Thus we have a popular movie, *Perfect*, whose central character dedicates herself to developing a perfect body. In what other era could a 45-year-old man, Remar Sutton, leave everything and move to the Bahamas for one year, with the sole purpose of transforming his body from a flabby 200 pounds into that of a muscle-man? His successful transformation through biking, jogging and body-building attracted a wide audience via newspaper columns and a book, and culminated in the sale of movie rights.

Skinny, 135-pound weaklings really do walk into health clubs and tell trainers, "I want to get big." The Nautilus machine is a tool for sculpting the body. The tanned, trim, taut and toned body is a precious object d'art, a masterpiece that we create ourselves. The body is then treasured, meticulously inspected, and painstakingly maintained in peak condition, like a teenager's motorcycle. And like the swaggering adolescent with his bike, we flaunt our bodies, showing off what we have so laboriously created.

Our pursuit of a youthful, beautiful and glamorous body fuels an enormous cosmetics industry, a stampede on plastic surgeons' offices, and a mass convergence on the weight rooms and whirlpool baths of vacation resorts and health clubs devoted entirely to the care and worship of the body. Cosmetic surgery in particular is an invitation to design a new body, to "create a new you." A 32-year-old psychologist told *Time* magazine how he regarded cosmetic surgery: "I see it as a little investment in health, like owning an electric toothbrush."

Surgery is portrayed by doctors and patients alike as an active and adaptive way of coping with the aging process and with life's problems—a way to get over a divorce or the death of someone important. Move an eyebrow up a bit, put a cleft in your chin, smooth away those crow's feet. Advertisements suggest a smidgen of "same-day surgery" to extinguish an offending blemish, as if it were as easy as erasing a mustache that had been penciled over a photograph of a beautiful model.

There is an inchoate belief afoot that mankind has at long last acquired the capability of ensuring good health. With the "healthy lifestyle" and modern biomedical technology, we feel we have the power to control our biological destiny, to avoid disease and remain healthy almost indefinitely. And regu-

lar, strenuous exercise is a central commandment.

More than a third of the respondents to a *Psychology Today* national survey are firmly convinced that what they do to stay healthy really counts. The ideology is revealed, for instance, in the doctrine of holistic health and in the testimonials of those who believe that a strong will to live has saved them from a fatal disease. In *Anatomy of an Illness as Perceived by the Patient*, which topped best-seller lists for a year, Norman Cousins reports curing himself of a severe disorder by adopting a healthy mental outlook, cultivating his sense of humor and prescribing vitamin C for himself.

Physical conditioning, along with prudent nutrition, self-care, and a positive mental attitude are thought to prevent illness, prolong life and even retard the aging process. Good health is not a gift, not mere good luck, not the product of heredity or regular everyday activities. Rather, it is the result of conscious, goal-directed behavior. Willpower, resolve and unwavering dedication to the goal of fitness are necessary.

Professor Robert Crawford's research interviews have revealed that when people talk of threats to their health, their understanding of health and prescriptions for maintaining health, they speak in terms of self-discipline, self-control and willpower. Health maintenance is thought to be a matter of forcing ourselves to do things that are good for us and of abstaining from, and denying our natural proclivities toward, dangerous habits. Shut off the television and do some sit-ups, reduce stress, throw away those cigarettes. With perseverance and a strict regimen of restraint and denial, optimal health can be attained and preserved indefinitely.

These themes of self-discipline and self-control are apparent in our attitudes toward weight. Obesity is seen as evidence of poor self-control. It suggests that you are self-indulgent, impulsive and lazy. Thinness, on the other hand, is an unmistakable sign that you have willpower, as Crawford has written. Dieting is seen as a form of self-discipline, a healthy assertion of self-mastery.

It is but one step from these norms, these imperatives, to find that "healthy habits" and the "healthy lifestyle" are considered moral and virtuous, standards for judging character and personal worth. And if health-promoting behavior is moral, then illness may be the result of moral failure or lapse.

*The tanned, trim, taut  
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precious object d'art,  
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*The threats come in  
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microwave radiation,  
from airplane crashes  
to mercury-tainted fish.*

Failing to live the healthy lifestyle connotes neglect, sloth and lack of self-respect. If we fail to revere our bodies, then we deserve censure. If being healthy is virtuous, then being ill means being guilty.

For example, a perfectly healthy medical outpatient noted, "I'm really kind of angry at myself for not getting more exercise—it's almost like a weakness that I can't make myself do it. And I know it's good for you. Maybe I'm just somebody lazy, somebody without willpower."

In conditioning and fitness we also seek protection against a world that seems daily to grow more perilous and threatening. With physical conditioning we hope to fortify ourselves against an increasingly menacing environment, one filled with danger and jammed with health hazards. Daily life is a mine field through which we must thread our way. We are in danger of being struck by a drunk driver or murdered with a handgun; there are poisoned Halloween candies and Tylenol capsules laced with cyanide; we read about ticks with Lyme disease, mosquitoes with AIDS, and "killer bees."

The threats come in every imaginable form, from casual sex to microwave radiation, from airplane crashes to mercury-tainted fish. Nothing in the environment can be trusted, no matter how familiar or innocuous it seems. Our houses have radon gas in the basement, formaldehyde fumes leaking out from behind lead-painted living room walls, and asbestos fibers raining down from the ceiling. And of course our hearts feel like time bombs in our chests, armed with saturated fats, ticking off the moments to a heart attack.

Confronted with a hazardous world, we try to assert control in the one sphere of influence that remains to us—our bodies and our personal habits. As one respondent to the *Psychology Today* survey put it: "Health is the only thing left in my life that I can control."

People do whatever they can as individuals to feel stronger and more immune, to maximize their chances of survival, to make their personal world seem safer. So we head for the basement to work out, install a water purifier on the kitchen faucet, stock up on self-care manuals and the latest edition of the *Physician's Desk Reference*, and check to see that everything in the medicine cabinet came with tamper-proof seals.

The fascination with survival can be seen in our flirtations with mortality

through marathon running and other extreme forms of exercise. As Irving Zola has noted, the marathon is an unusual sport in that for most entrants the point is not to win but merely to endure and to finish. The object of the race is to survive it. Even the losers in marathons are heroes, as epitomized by the young woman who received a standing ovation as she crawled to the finish line in the 1984 Olympics.

In triathlons and "iron man" contests, the object is also to simply survive the rigors of the event. The Western States Endurance Run, for example, extends over 100 miles of wild and rough terrain; the course climbs 17,000 feet, through temperatures that range from freezing to 100 degrees. Runners must contend with snow, mud and rattlesnakes. *Ultraspport* magazine notes, "The race has a fine tradition: No one has died." *Outside* magazine describes it as "the hardest, sickest, ultra-endurance event of them all . . . a day of living death."

Faced with a world whose dangers seem out of control, we each retreat to shore up our own physical integrity, to attempt to ensure survival by building resistance and stretching endurance. Powerless to stem the seepage of toxic wastes into our drinking water, unable to avoid carcinogens in our vegetables, at the mercy of some psychopath who would assault us on the street, we check our blood pressure, fortify our diet and carry weights with us as we jog.

Physical conditioning and fitness have come to signify far more than cardiac capacity and respiratory function: they symbolize strength of character and personal reform. Rowing machines and exercise bicycles will build up self-esteem and self-confidence as much as our biceps and quadriceps. Beyond any health benefits, we seem to be saying, conditioning is a way to purify the soul and become a nobler person.

Running has been extensively promoted on this basis, and its history has been elegantly reviewed by Muriel Gillick, MD. In the 1960s droves of middle-aged, overweight and sedentary men began running for their lives, and converts offered testimonials to their "rebirth" and "salvation" through running. The early pioneers of the running movement claimed powers of spiritual, moral and personal reform. Two such spiritual founders were George A. Sheehan and James F. Fixx. Sheehan, for instance, was a New Jersey physician who began running at the age of 44 and became a sort of prophet. In



running he discovered an unlimited potential for "self-betterment"; for him it solved a personal life crisis and then became a source of deep personal meaning.

Following the testimonials of the 1960s, running was widely touted in the 1970s for benefits far beyond the medical. Whereas initially most joggers were men with heart disease who sought improved cardiovascular conditioning, women and healthy young men now were running too. It was said to produce a keener competitive edge on the job, improve one's sex life and aid in the discovery of one's fullest spiritual and intellectual potential. Some even looked to running for immortality and immunity from aging, believing that "the race will continue as long as we run it." They voiced the belief that they would never die of a heart attack as long as they could run a marathon.

This view of athletic conditioning is easier to understand when we look back at Victorian England, where athletics also became a moral and ethical imperative, and fitness took on a larger cultural meaning, as has been pointed out by Bruce Haley in *The Healthy Body and Victorian Culture*. Between 1850 and 1880, athletics became a national mania in England. Many of the sports that we pursue today (like soccer, hockey, golf, tennis and badminton) first became popular then. Matches between university teams first began attracting spectators, records began to be kept, formal track-and-field competitions began. And, much as today, athletics became big business: newspapers and magazines followed sports closely, and athletic-clothing manufacturers sprang up.

Underlying this sports mania was the Victorian spirit of self-improvement. This was the age of training and the beginning of calisthenics. Sports were seen as a means of achieving health and forging moral development. The Victorians turned athletics from play into work by investing it with higher purpose and meaning. In confronting extreme physical demands, pitting one's strength and endurance against challenges and obstacles, one gained self-knowledge and self-reliance, built courage and fortitude, and forged one's character. The success of English teams in international sporting events came to be equated with British military prowess. "The battle of Waterloo was won on the playing fields of Eton" was a sentiment heartily endorsed.

In our own era, we are witnessing a similar apotheosis of physical fitness: the jogging path is now a road to invincibility, immortality and control over

our medical destiny. Behind our devotion to fitness lies a new ideology that good health itself, now termed "wellness," signifies almost everything good and desirable in life. It is summed up in the cheery contemporary bywords, "When you have your health, you have everything."

Physical fitness is a worthy goal as long as we exercise for the pleasure inherent in it, to improve cardiovascular tone and control weight, to lower the statistical risk of falling prey to certain diseases, even to raise our spirits and to feel more alive. But we will ultimately be disillusioned and disappointed if we exercise in order to become more satisfied with our careers, to become more optimistic and popular, to become better people. We must be careful not to expect too much from physical conditioning, because in reality we cannot control our biological destiny with weight-training equipment. We cannot remake the human body, no matter how taut our pectorals or how many face lifts we undergo. Aerobics classes won't subdue a sense of corporeal vulnerability or environmental threat.

To deal with these underlying insecurities, we would be wise to redress our unhealthy level of attention to personal rather than societal well being. If we worked harder to nurture community projects and neighborhood activities, philanthropic efforts, and our extended families, we might find ourselves less frightened by the specters of illness, disability and old age, less preoccupied with individual survival. It is societal institutions such as these that support us when our health fails and buffer us against illness and disability.

Good health is not really an end in itself, but rather a means to other ends. Good health allows us to enjoy our families, participate in community and neighborhood, live long enough to know our grandchildren. It allows us to find personal fulfillment, to enjoy our sexuality, to be creative and productive at work. But it does not confer these things upon us; it permits us to seek a fulfilled and complete life, but it does not substitute for one. □

*Arthur J. Barsky, MD is associate professor of psychiatry at HMS and director of the MGH primary care psychiatry unit. His thesis on the fitness boom is further developed in his recently published book, Worried Sick: Our Troubled Quest For Wellness, (Little, Brown, 1988.)*

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# Peak Experiences



## PEAK EXPERIENCES

# Tips From an Aging Mountaineer

by Ben Eiseman

*"Lift up thine eyes unto the hills for  
thence comes thy salvation."*

—PSALM CXXI

The most recent health fads are exercise and cholesterol. Not long ago it was rare earths. Aluminum was bad for you and manganese (or was it magnesium?) was good. When I was a boy, the calcium in milk was good for you, but when I put away childish things and took the part of a man, milk was bad because the calcium caused kidney stones. Now calcium is back in fashion because it keeps our bones from rotting.

Such are the health and medical yins and yangs. The wise physician learns the medical way of moderation, taking each fad with a modicum of salt to make certain that whatever path to health righteousness one chooses, its tortures do not outweigh its perceived as well as its probably real benefits.

These are simple principles of clinical decision making.

It is manifestly impossible to give a logical explanation for one's hobby, be it forcing tiny models of ships into bottles or golf. I happen to like climbing mountains, but take heart, I will not burden the reader with the semi-mystical, almost religious ecstasies that climbing-writers seem to believe is *de rigueur* in describing why they like mountains.

Certainly I get a thrill out of facing a palpable physical and intellectual challenge and finding a successful and relatively safe way up a difficult peak. I also feel a sense of accomplishment when I stand on top and realize the worst is over. Such enjoyments usually outweigh the inevitable miseries by a comfortable margin. I doubt, however, I am a better person because of my climbing.

Mountaineering is ordinarily considered a sport reserved for thin-waisted

young men and women who risk death on sheer rock faces. The fact is that the dedicated practitioner, with a little discipline, can continue the sport into his eighth decade. (I cannot with personal authority guarantee that it extends beyond that point.) To do so, however, one must not allow the ego to stand in the way of common sense. The aging mountaineer must be certain that his reach on a rock face does not exceed his grasp.

The best acrobatic technical mountain climbers are in their teens and twenties. These are the svelt, long-haired men and short-haired women who have headbands in common. They have, within the past 20 years, advanced climbing technology. Fortunately, I started climbing before this era began. We used a help rope, hob-nailed boots, slept in bulky, leaky canvas tents, thrashed uncomfortably in lumpy, damp woolen sleeping bags or blankets, and didn't take ourselves too seriously. Our climbs were unimpressive by today's standards, but we got up a lot of hills and enjoyed doing so while we pursued our various real world professions.

The next stage for climbers is to become a member of a mountain expedition to a major peak. There are two prerequisites to be considered an expedition high-climber. The first is to be a proficient and experienced technical climber. Few "rock-jocks" are eligible for expedition climbs, for the second requirement involves temperament. One must be able to fit into the team effort of two- to five-months duration, which constitutes a major expedition.

Even superficial review of the now considerable mountain climbing literature makes obvious the inevitable interpersonal tensions of a high climb. Mayhem and revolt seem to emerge to Clarke's Level One beneath the skin after a few weeks on a major peak. The trick is to avoid ulceration. The reasons are obvious. For two to five months, highly skilled individualists are incarcerated with a handful of equally sensitive peers in a totally closed environment. There is no privacy. Danger, cold, unaccustomed food, and separation from the stabilizing influence of a home environment compound the difficulty.

Climbers high on a mountain have the same degree of solitude as Siamese twins. For the climbers, the rope is as binding as the skin or skeletal bridge that guarantees togetherness and survival of the conjoined twins. Severance of the knot that binds, howsoever appealing on occasion, is not usually compatible with survival.



For these reasons the best expedition climbers are in their 30s and 40s. Many are professional persons and a fair number are physicians. In our first ascent of the East Face of Everest in 1983, for which I was a mere support person, three of the twelve high climbers were surgeons. We have a photograph of five HMS graduates sitting on a rock in Southern China two miles both vertically and horizontally from the summit. An equal number of medical colleagues have been on other expeditions of which I have been a part in the Karakorums, elsewhere in the Himalayas, in the Chinese Pamirs, and in South America.

Although a few middle-aged physicians reach the eminence of being high climbers, there has, fortunately, emerged a new niche for those of us who are not quite so expert or smart enough to devote so many months of our lives to climbing. We now can become a part of the support group, a euphemism for camp follower. Expeditions are expensive, sometimes costing \$500,000 or more. One way to help meet such a budget is to include climbing doctors in the small group who trek with the real climbers to base or advanced base camp. A fee in excess of the actual cost helps balance the expedition budget and, in exchange, the groupies not only see the wonderful country, but vicariously share the thrill and accomplishments of the real heroes who are on the actual assault.

Major peaks are in inaccessible, remote, interesting parts of the world such as Tibet, Pakistan, Peru and western China. Even though the support party may get no higher than 20,000 feet, they see some marvelous country. As members of such high climbing teams, I and friends such as Henry Bahnson '44 have been able to stretch our climbing careers into our 70s from the days we skied and climbed together as medical students.

One need not play only on the center court at Wimbledon to enjoy a recreational game of gentlemanly doubles. Neither must one climb only the glamorous 8,000 meter peaks to experience the thrills of climbing. The English take this to ridiculous extremes, climbing the rock faces of reservoirs in Wales and the Midlands. They are, however, a different breed for they also seem to prefer cold toast for breakfast.

I happen (perhaps not just by chance) to live in Colorado where there are 54 peaks over 14,000 feet. Many are easily accessible and provide great climbs or walks for several generations of family. However, I can attest that

pushing one's hobby on children under 8 or 9, be it climbing or skiing, is not advisable. Children get cold, wet, dehydrated, and are extremely labile emotionally. Like a collision at sea, a disgruntled grandchild can ruin the whole day. Wait until the children actively clamor to join up and disregard the earlier blandishments of their parents, who perhaps secretly want to put the responsibility for accompanying the old man onto the next generation.

Children are apt to remember the inevitable miseries of a climb such as blisters, wet sleeping bags, sprains and getting lost. Adults remember the joys of getting away from the weekday routines. When you judge the time ripe, be certain never to take more than one child at a time. It is a proven fact that no two siblings can ever be either enjoying themselves or enjoyable simultaneously.

One technique I have used in finding interesting peaks to climb is to accept overseas invitations to speak with the proviso that the host arrange a climb of the highest peak in the country. This, on occasion, has gotten me in over my head when the host let it be known in advance that I was keen to do some highly technical route on a tough peak. Professional as well as personal pride then excludes backing out. Some of the worst days of my climbing life have been spent in sheer terror under these circumstances, trying to look brave while suspended on rock faces where I had no business being in the first place.

There are advantages to such climbs in foreign countries, however. The highest mountains in many countries often lie in relatively inaccessible areas where the visitor has a great time visiting colorful areas of the country which may, in fact, be unknown to one's hosts. Sometimes at least half the enjoyment of a climb is getting to the mountain.

The young are able to work all day, party all night, snatch a few hours of sleep and then climb efficiently and happily for two or three days. Not so the aging climber, who, like the aging surgeon, feels wiped out after all-night operating or activities that break into sleeping patterns. The aging climber must avoid getting seriously out of condition. With advancing years it becomes increasingly difficult to get back into even reasonable shape for climbing. Like cardiac decompensation, it is difficult to reverse.

The aging physician-climber will seldom be able to train seriously for more



*"The aging mountaineer must be certain that his reach on a rock face does not exceed his grasp."*

than a month, but should stay in reasonably good condition through such exercise as simply walking up anything less than four flights in the hospital. A busy clinician or medical academician seldom has time for more than weekend exercise on a long-term basis.

Adaptation to altitude is physiologically interesting but beyond the scope of this presentation. These comments pertain to the art not the science of optimum performance at altitude. There are two objectives in altitude acclimatization for the aging climber. First is to get to the summit and enjoy it, and



second, not to look too bad in comparison with one's younger climbing colleagues. A good start is to live in Denver which is a mile high. A well known local ploy is to meet keen flatland climbing colleagues at the airport and proceed directly to the site of the climb.

The wise climber slows down immediately upon detecting even the slightest symptom of high altitude disease. The pace may seem irritatingly slow to the young chargers who should be encouraged to pass on the trail. A count of one to five between each step may be indicated. The secret is to keep going, not to charge ahead, stop, and then press on again at a fast pace. If such a tortoise philosophy is adopted, the wise climber often finds after a few hours that the younger hares are sitting on rocks holding their heads in their hands and taking aspirin.

Other techniques for avoiding high altitude headache deal less with sci-

ence than with the art of climbing. It is a proven fact that one cannot inhale while talking. It is wise, therefore, for the aging climber grasping at every straw for help, to encourage his younger or more fit colleagues to chat while climbing. Short staccato questions, which require little breath holding from the questioner, should at best encourage rambling, protracted answers. Sample questions for the young are, "How is school?" or "your girl/boy?" Political questions or those involving the economics of practice or litigation sponsor gratifyingly long replies from professional colleagues, but unless well planned out in advance, take too long to ask. During the colleague's answer the wise climber churns ahead silently, breathing through pursed lips (positive end expiratory pressure).

The wise climber also makes use of the occasional downhill portions of the trail. One uses short, slow steps going

uphill. This makes more efficient use of the quadriceps and muscles around the hips where extremes of flexion function at poor mechanical advantage.

On the heavenly, downhill grades the reverse is more efficient: big steps should be used to let gravity propel. Ligaments, not the muscles, provide the spring back to extension. Energy expenditure going downhill can, at best, be only 27 percent of that walking on the level. On long descents reliance on ligamentous spring may be paid for with swollen painful joints the next day if exuberance gets out of hand.

An important way to avoid altitude disease is to recognize its subtle early manifestations and to slow down. Anorexia, lack of thirst, vague malaise, fatigue and persistent frontal headache are premonitory. If the climber persists in racing ahead, he will soon feel as though the top of his head is blowing off. Although aspirin will help, the only cure is to go down a few thousand feet and wait it out for 12 to 24 hours. The full blown syndrome is seldom dangerous below 13,000 feet but it can ruin the pleasures of even a simple high altitude walk.

Nutritionists have analyzed climbers' needs ad nauseum. A few principles are worth remembering.

Climbing at high altitude results in large water losses caused by hyperventilation and mouth breathing. Water conservation from breathing through the nose is lost and is compounded by the low water content of cold air at altitude. As already explained, one of the earliest signs of high altitude sickness is lack of thirst, which precedes anorexia and often goes unrecognized. Experienced climbers, regardless of perceived thirst, drink lots of water. The color and frequency of urine is an acceptable substitute for a plasma osmometer. Swiss guide admonitions to the contrary, a good climber will drink water at every opportunity.

Food carried obviously must be light. We older climbers survived decades of tasteless, lumpy, dehydrated scrambled eggs, which were tolerable in war-torn Europe but should have been declared unacceptable once submarine warfare ceased. Another favorite of that era was beef stroganoff. I have fed more unused stroganoff to mountain animals than anyone in the Rocky Mountain West.

Happily, low fat, high carbohydrate, easily cooked foods are now available. My favorite for breakfast is instant applesauce, instant oatmeal and instant coffee. A peripheral benefit of such a quick meal is an early start and thus a



*"If such a tortoise philosophy is adopted, the wise climber often finds after a few hours that the younger hares are sitting on rocks holding their heads in their hands and taking aspirin."*





*"I have fed more unused stroganoff to mountain animals than anyone in the Rocky Mountain West."*

lead over younger colleagues who dawdle in camp after breakfast. A stern chase is a long one and the climbing tigers may not overtake you until mid-morning.

An inevitable question involves alcohol. Much thought has been given to this obviously important problem. I will only relate a hitherto unreported multi-center (Pittsburgh, Cheyenne, Denver) negative, clinical trial. Dehydrated Scotch is not feasible. Stick with highly concentrated alcoholic drinks that can be expanded with water and with concentrated drink mixes such as Wylers®. On long trips the calculated daily tot should be precisely measured in decaliters to avoid running out early and thus spoiling days or even weeks of an otherwise potentially enjoyable trip. No binge drinking.

It is important to check the security of the cap to the alcohol canteen. The closest I ever came to a revolt and physical harm from colleagues was once when a screw cap came loose on the second day.

A number of criteria come to mind in choosing a wife. One seldom mentioned, even by marriage counselors, is her potential tolerance for one's hobby. Remarkably few of my aging climbing friends married (or stayed married) to women who climbed or trekked prior to marriage. Most wives come along for a reason once given to me by

a friend's spouse, who explained that "the only time you guys are any fun is when you are in the mountains!"

My wife made it clear when we were in our forties that once our children were old enough to take over, she was going to quit, a common threat but one I notice is seldom carried out. The

noise level may increase perceptibly as the years go on, but by the middle forties the women also often become addicted, even if they vehemently deny it.

I must admit a little insecurity on this matter at the moment. Some months ago at 3 AM, high in the Peruvian Andes, with the wind and snow constantly drumming our tent, my wife suddenly announced, "We have been over 15,000 feet for more than two weeks and I will not put up with this ever again!"

I believe that, like the pangs of childbirth, she will forget such temporary unpleasantness. We will see when we climb in New Zealand in early 1989. I am relatively optimistic, for she didn't complain unduly last summer when we climbed a relatively simple 14,000 foot peak. One must, however, as always, be sensitive to the emotions of one's wife.

One must also select other climbing partners with care. Some people have a habit of getting lost. Others won't pull their own weight in camp or perhaps sing off key or start songs with enthusiasm for which they know only the first verse. Top tenors and second basses often enjoy otherwise undeserved popularity as invitees for a climb. After a time one shakes down to a few compatible climbing friends and scans with critical scrutiny a suggested newcomer.

The wise physician chooses a hobby



*"We have been over 15,000 feet for more than two weeks and I will not put up with this ever again."*

largely on the basis of intuition—what is enjoyable. In considering exercise one should choose a hobby that can be pursued as one grows older and has for the first time some leisure. Surprisingly perhaps, mountain climbing and trekking fit the bill.

A first way to prolong the joys of mountaineering into older age is simple physical conditioning. But my comments concern some of the more subtle methods. At first thought, one might be surprised that gamesmanship pertains to such a non-competitive sport as climbing a mountain. Serious students of games appreciate the exact opposite to be true. The more alleg-

edly “non-competitive” the game, the more fierce are the tricks used to win. The suave, friendly veneer of mixed-doubles tennis is a case in point.

This article contains only a few of the techniques that I have found useful in mountaineering during my more mature years. Others are so highly classified that I am not prepared to release them at this time. I will do so when I quit climbing, which I do not anticipate will occur within the foreseeable future. □

*Ben Eiseman '43A is professor of surgery emeritus at University of Colorado School of Medicine.*

path ends in a platform of ice the size of a small desk.

Everything is below me. The sky is deep blue and cloudless. The cliché is true, the vistas do seem to stretch infinitely in all directions. I look down over Lhotse, the world's fourth highest peak, upon the endless chain of mountains in Nepal. The Tibetan plateau on the other side extends to the horizon where I can see the curve of the world dropping away. For 15 minutes I savor the view as the highest person on earth. I am the 209th person to stand on the summit of Mt. Everest.

My team of 11 climbers departed America for Kathmandu on July 20. Our team included three women bidding to become the first American woman to climb Everest. The media played up this angle, as did our sponsors. As a physician my first priority was a safe and healthy expedition. As a climber who had attempted Everest twice before without reaching the top, my second goal was to get myself up the mountain.

Having been there also gave me a realistic perspective on the task ahead. Any success would have to be a team effort. Diana Dailey, Peggy Luce and Stacy Allison were all selected for climbing ability, strength and personal qualities. They just happened to be women. On the mountain we would all be equal.

Chomolungma treats everyone equally. The Sherpa people and Tibetans, who live in her shadow, call the Goddess Mother of the Earth “Chomolungma.” They believe she resides in the mountain bearing her name. In 1842 the British surveyor general of India, Sir George Everest, calculated the height of Chomolungma to be 29,002 feet above sea level (it is actually 29,028), the highest mountain in the world. In 1863 the English renamed her Mt. Everest and proposed that she should be climbed. One of the early pioneers of Himalayan climbing, George Leigh Mallory, said he was trying to climb Everest. “Because it was there.”

It was not until last year that I fully understood what he must have meant. It was not simply that Chomolungma was “there” as the highest point on Earth, a logical goal for any mountaineer. It was that she was “there” inside of him.

My climbing internship began on frozen waterfalls and vertical rock faces doing gymnastic, technical ascents through college. I was then awarded a Marshall Scholarship to Oxford University. Oxford has a rich climbing tradition. I was twice the beneficiary of their



## PEAK EXPERIENCES

# Upward Ambitions

by Geoffrey Tabin

**T**he ridge I am climbing is barely two feet wide. To the east is a sheer drop of 12,000 feet into Tibet. Westward it is 8,000 feet down to the next landing in Nepal. The angle increases from 70 degrees to vertical at the Hillary step.

Climbing unroped, I delicately balance the crampon points on my right foot on an edge of rock. I swing my left foot with all my remaining strength into the adjoining ice. Precariously balanced on quarter-inch spikes attached to my

boots, I gasp for breath. Forty feet higher the angle eases. Adrenalin mixed with joy surges through me. After eight hours of intense concentration, I know I will make it.

The 70-mile-an-hour wind threatens to blow me off the ridge. The ambient temperature is far below zero. Yet, I feel flushed with warmth. Ahead stretches a five-foot-wide walkway angled upward at less than 10 degrees. Thirty minutes later, just after 10 o'clock in the morning on October 2, 1988, the



"A.C. Irvine Award for Oxford gentlemen to enjoy strenuous holidays in mountains abroad." Irvine had disappeared with George Leigh Mallory in 1924, high on the slopes of Mt. Everest. His memorial helped me do a climbing residency in the Alps, and on remote mountains in Africa and Irian Jaya, New Guinea. I matriculated at Harvard Medical School in 1980 with enough of a climbing reputation to be invited on an American expedition attempting Mt. Everest's last unclimbed face.

Mt. Everest is a three-sided pyramid. The South Face is in Nepal. The West and Southeast ridges define the border with Tibet. The North and East faces and the ridge in between lie completely within Tibet. The first Everest ascent, by Sir Edmund Hillary and Sherpa guide Tenzing Norkay in 1953, followed the South Face to the Southeast Ridge from Nepal. The Chinese climbed the North Face in 1960. The West Ridge was climbed in 1963. By 1980 Everest had been scaled in winter, during the monsoon and without supplemental oxygen.

But the vast East Face remained unexplored. The last Westerner to look upon it was Mallory, in 1921. He declared the East Face to be impossible, concluding, "Other men, less wise, might attempt this way, but, emphatically, it was not for us."

In 1983 I finished the first clinical clerkship of my third year at HMS and departed for China. In Beijing I met a group of eight support climbers who would be helping us as far as base camp. Included in that number was Ben Eiseman '43A. Their enthusiasm and support was instrumental in the first ascent of the most difficult route on Mt. Everest. We traveled together to Lhasa and across Tibet to Kharta, where we began the seven-day trek to our base camp at the foot of the East Face.

On the approach I had the pleasure of getting to know and learning from Ben Eiseman. He shares my interest in high altitude physiology and has an all consuming curiosity about our world that still inspires me. Before leaving base camp, Ben and one of his fellow "trekkers" made the first ascent of an unexplored peak east of Everest.

The first vertical mile of our route followed a sheer rock and ice buttress, more difficult than anything previously attempted on a mountain the scale of Everest. Surmounting this obstacle, we reached a steep snow ridge. Six of my teammates reached the top before my summit bid was stopped by a storm. I returned to finish my degree at HMS



*Four HMS grads two miles from the Everest summit in 1983: Ben Eiseman '43A, Jim Greenbaum '51, Henry T. Bahnson '44 and Geoffrey Tabin '84.*

and begin post-graduate training in orthopedic surgery. But, the Goddess Chomolungma was "there" inside me, slowly becoming an obsession.

I am often asked how I am able to combine high-level climbing with a career in medicine. Remaining physically fit has not been a problem. As a student I lived in Harvard Square and ran to and from the medical area every day. I also worked out on the numerous outcrops of rock in the Boston area as much as possible. To keep up my finger strength I stopped daily at the stone wall across from the Longwood T stop. I traversed back and forth, eventually

training myself to hang on for 30 minutes after my forearms began to cramp.

As a resident at Michael Reese Hospital in Chicago, I continued to commute the five miles to work on foot. Every other day, when I wasn't on call, I stopped at Soldier's Field and sprinted the stadium steps. Rock holds glued to the walls of my apartment and strategically placed pull-up bars in the hospital completed my regimen. On vacations, of course, I climbed.

A more difficult problem for me has been coordinating the time required for big mountains with my medical training. I fell while rock-climbing during my first year of medical school, sustaining a serious concussion. Fortu-



nately my HMS '84 classmate Hansel Stedman was with me, saving my life when I stopped breathing. The dean's office helped me through a difficult year as I attempted to learn anatomy with an impaired short term memory. They were less supportive when I suggested that I needed a three-month leave to go to Everest at the start of my third year.

During my second year of orthopedic residency I was invited to return to Chomolungma with the 1988 American Northwest Everest Expedition. My chairman would not grant me a leave of absence to climb. I spoke with other orthopedists about my dilemma and thought I would be able to continue my training in another program in Chicago. I gave notice that I would be leaving in July for Nepal.

I am not the first physician with these conflicts of interest. With my ascent, a remarkable 7 of the 26 Americans to reach the summit of Everest have been doctors. But none were women. Junko Tabei, from Japan, reached the summit in 1975, proving that females can acclimatize and develop the endurance to climb Everest.

American women on Everest are not something new. Arlene Blum was a climbing member of the second American assault on the peak in 1976. In 1982 Marty Hoey, perhaps the best female mountaineer in the country at that time, fell to her death on Everest. A documentary movie was made about this attempt, giving considerable publicity to her quest. After 1983, when all of the major routes had been climbed, the "first lady" hype intensified. In 1988 there were two American teams racing to get a woman to the top.

Stacy Allison, a petite blond bundle of energy from Portland, Oregon, had been a serious climber for nearly half of her 30 years. In addition to well honed rock and ice climbing skills, she had climbed Ama Dablam, a 23,000 foot little sister of Everest, and had reached 26,000 feet on Everest in 1987. The goddess was within her. Similarly, Diana Daily, a powerfully compact school teacher from Seattle, who takes her training very seriously, was internally motivated to make it up the mountain. Peggy Luce, a bicycle messenger from Seattle, had never climbed outside of the United States and was thrilled just to be going to the Himalayas.

Once we reached base camp we were all climbers working together to get up the mountain. We were also joined by a team of climbing Sherpas who would be helping us. The cross-cultural friendships and close bonding

that comes from sharing a rope would make the experience worthwhile, whether or not we reached the summit.

Our first obstacle was the Khumbu Ice-fall. A river of ice flows from the upper slopes of Everest and Lhotse down through a flat valley known as the Western Cwm. The angle changes abruptly with the ice tumbling steeply for 2,000 vertical feet to the Khumbu Glacier. This ice-fall is an area where unstable ice formations the size of apartment buildings frequently and unpredictably crash down amidst ever changing crevasses. Dozens of climbers have been crushed to death trying to negotiate its jaws.



It required seven days to establish a safe route through the maze of falling ice. We then advanced through the Western Cwm to the base of the Lhotse Face. A vertical mile of strenuous ice climbing led to our final camp on the mountain at the South Col between Everest and Lhotse.

We were now at 26,000 feet above sea level. Ahead stretched 3,000 feet of steep climbing to the top of the world. To this point we had been climbing roped together or anchored to fixed lines that we left in place. I led the final slope to the col and, pausing to regain my breath, gazed upward to trace the route in my mind. On summit day I would have to go solo. There would not be enough time to stop and belay if we were to reach the peak. A rope would cause two people to die instead of one if there were a slip.

Above loomed a steep 1,500-foot ice face leading to the Southeast Ridge. From there we would follow a jagged knife-edged crest to the South Summit, the highest peak visible to me. Looking out into Tibet, I viewed the majestic summits of Makalu and Kanchenjunga. The weather was perfect. I wished that

I could continue on up. But we needed to establish our high camp and stock it with food, fuel and oxygen before attempting to reach the summit. I slowly turned and descended while silently beseeching Chomolungma to remain gentle with her weather for a few more days.

Our team was exceptionally strong. Nine of us had acclimatized well enough to reach the South Col feeling strong and ready to try for the top. Our first summit team of Steve Ruoss, Stacy Allison and our leader, Jim Frush, left the South Col at midnight on September 29. Unfortunately, there was only one bottle of supplemental oxygen for the three of them. They held a lottery at 28,000 feet. Stacy won. Jim and Steve turned back while Stacy and Sherpa Pasang Gyalzen pressed on to the summit. The American team on the north side was still low on the mountain. Stacy Allison became the first American woman to reach the top of the world.

Three days later, with gusts up to 80 miles an hour, I returned to the South Col accompanied by Peggy Luce and Sherpas Dawa Tsering and Nima Tashi. The wind intensified during the night. The Sherpas did not want to leave the tent. But this was Everest. I had been close before. I left at two in the morning and the other three followed. We all reached the top safely in one of the most emotional moments of my life.

But we still had to get down. Peggy slipped on the descent, stopping inches from death. She lost her goggles in the fall and quickly became snowblind. Dawa Tsering guided her back to the South Col. The weather deteriorated rapidly with a storm moving in the next day. Our third summit team suffered the same disappointment that I experienced in 1983. But we all shared the success. During a season when nine climbers from three other expeditions died on the mountain, our team put six people on top and brought everyone home in good health.

"Climbing your own Everest" has become a metaphor for striving to reach your dreams. Mine happened to actually be named Everest. The question I am now asked is, "What next?" My answer is new dreams, new goals and looking forward, not back.

The residency that I expected to have when I returned fell through. So my first task is to find and finish a residency. Then there is the challenge of helping shape the direction of medicine in the next century. As for mountains, my goal is to continue climbing into my eighth decade, sharing the joys I have found in the high peaks. □





PEAK EXPERIENCES

# The Ultimate Runner's High

by Joan Lamb Ullyot



Joan Lamb Ullyot running below Pang La, with Everest in the background.

Oxygen bubbles up softly through a water trap and into air hoses aimed at our pillows. We are in the World's Highest Holiday Inn, a.k.a. the Lhasa Hotel, where the sheets are clean, the plumbing Western, and the management anxious to avoid altitude sickness among the tourists. Lhasa lies at 12,000 feet, on the high plateau of Tibet. From the hotel windows, we can see the Potala Palace, former home of the now-exiled Dalai Lama. Many-tiered, with gold roofs gleaming in the clear air, the Potala dominates Lhasa like a medieval fortress.

At breakfast John is in a state of mild shock. He went for an experimental run early this morning and had to walk after 90 seconds; the one-mile walk-jog took him almost 18 minutes. This is hardly surprising since John, like half of our group, normally lives at sea level and his body resists the abrupt transition to high altitude. But John's difficulty in running worries us all anyway, because our mission here is to run. Not just in Lhasa, but non-stop from Shegar (14,000 feet) all the way to the base camp of Mt. Everest, at 17,000 feet. The distance is reputed to be 100 miles, which we will attempt to cover in five days, camping out along the way. We have no illusions about actually running the whole way, but would like to do respectable amounts of jogging, wherever the terrain permits.

This "lunatic expedition," the Tibet-Everest Research Run, was the brainchild of Otto Appenzeller, an ultramarathoner and neurology professor from Albuquerque. "This run has never been attempted," warned Otto in his ads for the trip, "and only adventurous spirits are advised to apply. Conditions and the magnitude of stress are unpredictable and likely to be hazardous."

Later bulletins warned us about the chaotic road conditions, mudslides and boulder fields. Plus, of course, the altitude factor. I asked several mountaineering doctors their opinion of our itinerary, which called for 20-milers starting our third day in Tibet. "Obviously," sniffed one expert, "Otto wants to study headache and altitude sickness." I signed up anyway, unable to resist a good challenge.

I had spent the past two months running at altitude to get ready. But my own test mile later that day takes me 12 minutes, 18 seconds, even though it feels like an easy 8-minute pace. Lhasa is flat; I foresee problems with the uphills.

In all, 11 adventurous spirits, nervous but game, are here to make the trek. We are a mixed bag: Tim and Pete,



*Ullyot rowing at 14,000 feet.*

Otto's sons, will help with the scientific testing, which we have all agreed to. Tim and his friend Beth will also run, while Pete rides a mountain bike to base camp. Steve W., our physiologist, and Carol, my designated tentmate, are also runners from Albuquerque. Reinhard is a small, lean ultramarathoner from Switzerland, and John is a scientist and writer from Washington. We have a surfeit of MDs—besides Otto and me, there are Steve S., a pediatrician, and Tom, an orthopedist. (Tom will probably be much in demand on this trip.)

For everyday crises and general medical care, we have our expert mountain travel guide, Bruce Klepinger. With over 1,000 climbs and 100 trips to his credit, he was assigned to us just two weeks ago. The rumor is that three less experienced guides blanched and backed out when they realized our potentially horrendous medical and logistical problems. But Bruce seems unfazed and very competent.

Otto, our scientific leader, is unconventional in his dress. He favors tie-dyed pink/purple shorts and an alpine hat, which sets off his bristling handlebar mustache and dark, sparkling eyes. He seems to intimidate Mr. Li, our Chinese interpreter from Beijing, a slight man who speaks English better than he understands it. Our Chinese/Tibetan staff also includes four drivers, a cook and a liaison man from the Sports Travel bureau.

We are in Lhasa for only a day, much of which is devoted to scientific tests. We finally escape in the after-

noon to explore the city on foot. Despite the introduction of electricity and other amenities by the Chinese, Lhasa retains a religious and almost medieval character. Below the Potala, devout Tibetan pilgrims spin prayer wheels and prostrate themselves in devotion at temples. In the nearby Chinese market, vegetables are plentiful, but flies abound and dogs fight to claim a share of yak haunch.

Exploring upstairs in the Jokhang temple, center of Tibetan Buddhism, John and I stumble into a room full of crimson-robed monks, who eagerly invite us to sit with them and talk. We hear of unrest, and a demonstration that very morning against Chinese occupation of Tibet. The Chinese military presence here is not subtle. Soldiers—many of them armed with submachine guns—patrol the streets and keep a close eye on foreigners as well as monks.

The next morning we leave the Lhasa Hotel, with its oxygen and clean toilets, and head south toward the Himalayan crest. Our bags and camping gear are loaded onto a truck, along with 14 wooden crates of scientific equipment, and a rowing machine—all designed for our torture in the coming days. For present torture, we pack in tightly, six to each 4-WD Land Cruiser. Steve S., Tom and Pete, definitely the heftiest members of our group, find themselves suddenly unpopular. Meanwhile, we three women and Reinhard are greatly in demand, thanks to our presumably narrower hips.

Jammed in together, wearing surgical masks against the dust clouds, we

bounce violently along at breakneck speed, honking but seldom slowing as we barrel past villagers, dogs, farm wagons, goats and sheep. The Chinese drivers are apparently in competition with each other to arrive first at each rest stop; our driver smiles gleefully as we hit each bump hard, as long as we gain on the vehicle in front.

The trip to Shegar takes two days of jouncing over rough dirt roads, six to ten hours a day, across dusty plains and over high passes. We picnic by a huge overhanging glacier at 17,000 feet, then descend into a fertile valley where villagers are busy harvesting barley. There is little traffic except for the occasional army vehicle. Most heavy work is done with yaks—we see these huge, shaggy animals carrying loads, plowing and threshing—being driven around in circles over the harvested grain.

Like the road, accommodations and food deteriorate steadily once we leave Lhasa. There are clean beds but no hot water or showers in Shigatse, but this is luxury compared to Shegar's Stalag 17, disguised as a tourist hotel. We sleep in barracks, three to six to a room, on cots of dubious cleanliness, and most of us break out sleeping bags in self-defense. Cold water for washing hands is fetched in washbasins from a 50-gallon drum outside. Beer is preferable for drinking and brushing teeth. The toilet, a term used loosely, is a central, foul-smelling, concrete building with holes in the floor. Food, alas, is on a par with the rest of the facilities.

During the night, as cold and discomfort increase, I lie awake listening to the ferocious barking and howling of local dogs—probably roaming in packs, looking for stray tourists, I imagine. When Carol gets up to go to the toilet, Beth and I consider letting her test the dog situation alone, but finally relent. Together, the three of us manage to evade the dogs, ignore the latrine and take our leaks around the corner, under the starry skies. By morning, all are anxious to get on with running.

We have, of course, run along the way, notably in Shigatse. There, setting out to jog around the huge Tashilhumpo monastery, Carol and I were suddenly abandoned by our male companions—they had noticed with alarm the huge number of dogs sitting and lying in our path. Fat, placid and tame, these Tibetan dogs are thought to be reincarnations of monks who didn't quite make the grade in previous lives. Whether because of past-life associations, or good food and indulgent treatment, dogs are especially numerous around temples. They eyed Carol and me lazily as



we jogged past in our shorts, breathing hard at 13,000 feet.

The pilgrims gave us mixed reviews—the women smiled, laughed at us, and returned our greetings—"tashi dele!" But a couple of older men seemed to take offense at our bare legs. One shouted angrily and even whacked Carol's legs with his prayer beads. We dashed as quickly as possible along the trail and back to the hotel, resolving to wear tights on future runs.

We do put on tights in Shegar, rising before dawn—8 AM here—eager to start our 100-mile run. But there are a few delays. Our little Honda generator, which powers all the research instruments, stubbornly refuses to start. Last night Steve W. fiddled with it for hours, while Otto's mustache dropped in despair. Then they noticed that the "gas" supplied by the Chinese was kerosene, not gasoline. Aha! But even fed with the proper fuel, the generator balked. This morning Steve makes a small adjustment to the carburetor, something that came to him last night in a dream. Presto! The generator comes back to life, and we're all set to run.

But not just yet, it turns out. There is some confusion about the distance to our first proposed campsite—is it 35K, or 50? To be on the safe side, we start our run from 14K out of town. This is the moment of truth; we'll be on foot all the way from here to Everest. Nervously, we set out together but spread out quickly after turning onto a rough side road that heads south. The air is thin, we start to ascend gradually, and we all lapse into our own styles of running.

Steve S. jogs ahead stubbornly and steadily, I do a fast jog/walk, and others use slower versions of these two basic gaits. But we are on the trail less than two hours—the shorter estimate was right—and we arrive more or less together. "Keep going!" shouts Steve as Reinhard and I cut the final switchbacks and arrive in camp right on his heels. "Otto wants us to do 20K today, so we have to keep running up to the pass." The pass is Pang La, looming above us at 17,000 feet. Reinhard and I make some unprintable reply about Otto's 20K, and head for a beer and our tents.

Heavy exertion high up is an invitation to altitude sickness, and our camp is at 15,100 feet. Several of us are pretty flaked out this afternoon, with headaches, nausea and vomiting, but we all manage to get through the scheduled testing, and the more able-bodied go for a long hike later. Most have a hearty appetite for supper, which is a great

improvement over the cuisine at Stalag 17. Our Tibetan cook, Dorje, fixes Chinese vegetarian dishes served over rice. It's tasty, but it doesn't add up to 5,000 calories, and Otto insists that we need that many to keep from losing muscle mass at altitude. So we supplement the Chinese camp food with instant soups, dried and canned fruits, cheese and Power Bars from home.

Otto is also concerned that we eat enough garlic, which he touts as a universal preventive and cure-all, good for everything from colds and altitude sickness to impotence. Originally he insisted that Bruce supply 10 pounds of garlic for each runner—over 110 pounds total! But after much discussion about size and weight problems, not to mention digestive limitations, Otto scaled down the requirement to a few heads of garlic apiece—several cloves a day. This seems a more manageable amount to add to soups, rice, etc. Carol refuses to eat any, but may change her mind when cooped up in a tent with me.

Our first night in camp is memorable even without the garlic. High winds shake the tents, and we are all "diuresing" like mad in response to the altitude. For the uninitiated, this means that the tent flaps are unzipped and rezipped all night, as one after another of us gives up and goes out into the cold, windy darkness to pee. "It's almost worth it for the stars," says Carol after her first excursion. So I screw up my courage, unzip sleeping bag and tent, and check it out. She's right—the stars are so thick at this altitude that I can

barely distinguish familiar constellations against the brilliant backdrop of the night sky.

By morning, altitude headaches seem to have gone—perhaps a result of all the peeing—and we are eager to head up to the Pang La pass for our first good view of the Himalayan range. But first we say goodbye to Mr. Li. By some physiological fluke, our non-runner is the only one to be seriously sick. Mr. Li has had severe headaches since arriving in Lhasa, and he staggers and feels confused. Bruce makes the diagnosis of high-altitude cerebral edema, and sends him back down to Shegar to recover.

Miles of switchbacks and a 2,000-foot climb await the rest of us, so we set out soon after breakfast. Steve S., despite his lack of altitude training, seems determined to stay in the lead by sheer guts and basic speed; he powers ahead, jogging steadily, and stubbornly following all the switchbacks. Steve W. and I aren't such purists: we make a beeline toward the saddle up the valley, walking cross-country over rocks and tundra. It's hard work, and we're sucking air at a phenomenal rate, but after climbing steadily for an hour we're there.

The view is indeed overwhelming—an unbroken, snowy range of giant mountains rising into the blue and cloudless sky. I have tears in my eyes as we wait for the others and find that all have the same emotional reaction. By the time everyone reaches the pass, Steve S. has already grown impatient



*Curious Tibetans.*



and run on down the mountain. But the rest of us linger and pose for group portraits by the stone mounds and prayer flags that mark all summits and passes in Tibet.

The 12K descent from this pass, facing Everest most of the way, is a real highlight for a downhill runner like me. I feel exhilarated and whiz down the curves non-stop, or almost non-stop. I set some kind of record for diuresis, making a total of five pit-stops in the period of an hour. Camp today is 3,000 feet below Pang La, in the valley just before a Tibetan village.

The villagers quickly gather around the tents and watch mystified as we set about our daily tests: cerebral and peripheral blood flow, thermograms of the hands, blood viscosity, etc. Most intriguing of all to them is the rowing machine, which each of the runners works out on for a six-minute, all-out effort. We work harder, it seems, than in Lhasa, but most of us can't get our heart rate up over 130 beats per minute—puzzling, since we row to exhaustion.

The Tibetans watch us in fascination, then two or three of them try the strange machine, while their friends giggle. Even untrained and unused to rowing, the villagers can match our performances: such are the advantages of living at altitude.

The brash curiosity of these Tibetan peasants astounds us. They come up close and feel our clothes, stare openly, even come and peer into our tents. To get privacy, we have to push them out and zip up the flaps. And even this doesn't work during meals. Every few minutes the door of our large mess tent is unzipped from the outside and three or four Tibetan heads push through the opening to watch our every bite. Otto shoos them out once again. "How do you say 'go away!'" in Tibetan?" he asks plaintively. "It's not in our phrase book."

Over supper we confer about our route. It's becoming clear that the mileage estimates given us were exaggerated, and the total distance we have to run is closer to 100K than 100 miles. We've done 40K in two days and now decide to aim for 30K each of the next two days, so we can arrive at base camp a day early.

Most of the remaining distance is along a level, rocky valley, out of sight of the Himalayan peaks. Our hours of jogging—and walking—here at 15,000 feet are enlivened by a few new challenges. Steve S. develops a persistent chest pain and abandons his position as frontrunner, walking cautiously. Tom's knees are swollen and painful after the long downhill run from Pang La; he



*Switchbacks up to Pang La pass.*

walks with Steve and occasionally hitches a ride in the Land Cruiser that carries our water supply. We all hop into the vehicle later to ford the icy Rongbuk River, formed by glacial melt from Everest. Pete, pursued by a ferociously barking village dog, starts to bike across, but finally wades through the swift, thigh-deep water, carrying his bike.

Our final day of running is strangely isolated, desolate and beautiful. We are ascending gradually through rocky terrain, toward 17,000 feet, and differences in altitude adjustment become apparent. Steve W., who lives at 8,000 feet, disappears ahead. Tom promises me a

Snickers if I can catch him, but I never even get close. The rest of our group are strung out behind, singly or in pairs. Otto and Reinhard amble along, enjoying the views and taking pictures; John is feeling sick and slow. Our water carrier stops by a trailhead and points us up the trail instead of the road. This way is more direct, but we've seen the last of our water supply for the day.

The next few hours I am entirely alone in the barren countryside. The last village has been left behind, and the rocky footpath winds on above a rushing, blue-white river. There is no vegetation up here and very few animals. A large brown hare bounds across



my path. Awhile later Pete passes me on his mountain bike and at the next bend stops to point at a huge lammergeier, or bearded vulture, circling above—is it preying on the wild hare or us? Pete disappears, and I am again alone, with no sound but the wind blowing down the valley. I walk steadily now, too tired and dry to jog even a few steps. Each turn of the valley now brings a view of snow-covered peaks, but Everest is still hidden.

Then, after nearly four hours, the valley makes a final turn south, and the mountain is there in all its splendor, filling my view. The ruins of Rongbuk monastery cling to rocks on the left; only a huge white stupa and strings of prayer flags testify to its former glory. But the mountain remains. The Tibetans call it Chomolungma, or “Mother Goddess of the Snows,” and the name seems to fit.

For a few minutes I stand there, overwhelmed. Then I notice I’m freezing—there’s a strong, icy headwind blowing down the valley from the mountain. A cloud banner of snow blowing off the summit shows the strength of the wind some 12,000 feet higher. I quickly pull out a wool cap, mittens and Goretex windsuit from my handy daypack, thankful that I carried them all this way. Coming along the valley, shorts and a T-shirt were enough, but now I am definitely in the Himalayas.

But there’s still a long way to go—10 to 12K—over rough road and then another “shortcut” over the glacial moraine which forms irregular hills around base camp. I get lost for a while, stumble upon the British camp—one of six expeditions making summit attempts this year—and am directed vaguely toward “the Americans.” Actually our tents, when I spot them, are set up near the Japanese. Someone hails me from the scientific tent, and I stumble in to find Bruce, Pete and Steve W. sitting around on crates, enjoying beer. I join them and quickly feel restored.

Before long Steve S. arrives, and John about 20 minutes later. Neither is in a good mood after six hours on the trail. Steve calms down after a beer, but John continues to vent his displeasure on the nearest convenient target, Bruce, whom he blames for the lack of water, the length of the day’s run, and poor management in general. Bruce is philosophical; he shrugs after John storms out of the tent, telling us that this is just another effect of high altitude. Bruce is used to being yelled at and has even had stones heaved at him on other Himalayan treks. Fortunately, the rest of the troops arrive in better

humor over the next couple hours—probably they didn’t push themselves quite as hard. Otto and Reinhard come in last, just before supper, and are happy as clams. They stopped to visit the Rongbuk monastery, and took some “splendid” photos, reports Otto happily.

We have been very lucky with the weather and photo opportunities thus far. Early the next morning we are awakened by strong winds which shake the tent furiously and threaten to topple the nearby mess tent. Ominous clouds gather over Everest, hinting of snow on the mountain now, and possibly at base camp later. After a day devoted to scientific testing, the night is cold. Inside my down sleeping bag I am now wearing polypropylene long underwear, wool socks, Patagonia Synchronilla pants and jacket, a wool shirt and a hat. But I am still cold at 2 AM, when I give up and go out for the obligatory nighttime pee. I crawl out into several inches of fresh snow.

At dawn, there is enough snow on the ground for some good snowball fights, and the clouds are starting to disperse. By mid-afternoon, much of the snow around us has melted and Everest re-emerges from its cloud cover, fresh with new snow. Bad news for the summit teams waiting above to make their final assaults, but great for photos down here, and for an afternoon hike up the glacier.

Not all of us are in the mood for going higher—Tom and now Otto have bum knees. Beth has a splitting headache, John still feels lethargic, while Steve W. has a tooth abscess and looks like a lopsided chipmunk. As for Steve S., he stays in his tent reading mysteries. Now that our mission is accomplished, he is impatient to leave. “Typical mountaineering temperament,” comments Bruce. “They always want to get to the summit first and then go right back down.” But the five remaining runners are still healthy and eager to explore, as is Bruce.

Time is short, so we set out briskly and manage to get up well above 18,000 feet before the gathering darkness forces us down. The sky is now clear and the mountains beautiful; the cold, thin air feels exhilarating, like champagne. Is this a natural high, or lack of oxygen? Whatever it is, I like it and resolve to return someday.

But now we must pack up and leave, riding in the Land Cruisers back down the rutted road and over Pang La, then on another full day to the Nepali border. Our research run is over, but not our adventure, because there is still the problem of washed-out roads. Just before

the Tibetan border village, our Land Cruisers stop at the edge of a mountain slide. The drivers refuse to go over what looks like a highly unstable mud road. So we say goodbye, shoulder our daypacks and walk. Porters carry our baggage—including the 14 crates—down steep, slippery paths, while we enjoy the lush vegetation and bustling village life of Nepal.

We walk for two hours, ride in a truck for a stretch, then walk again for hours. The air is warm, heavy and humid, strange after the cold mountain air of Tibet. After weeks of hyperventilating, my respiratory rate has dropped so low here that I have to keep reminding myself to breathe.

In the space of a day, we have descended about 10,000 feet and left the 16th century for the 20th. Waiting for the porters, some of us take refuge from the heat in a roadside pub, drinking our beers beside a huge Rambo poster on the wall. What a scruffy bunch we are, I think fondly, gazing at my companions. None of them has shaved for almost three weeks, and bathing has been limited to perfunctory efforts in the washbasins at Stalag 17. But we’ve all met the challenge of the ultimate high-altitude run, and we’re all safe and sound now. Steve W. no longer looks like a chipmunk, thanks to antibiotics; Tom’s and Otto’s knees are again functional after drainage and anti-inflammatory treatment; and those who felt lethargic, sick or just plain grumpy at 17,000 feet are now miraculously restored to normal. To prove the point, John goes out for a run the next morning, in Kathmandu, and returns happier than he’s been since Lhasa. Here at a mere 4,000 feet, he ran for a full hour, could breathe perfectly well, and didn’t have to walk a step. □

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*Joan Lamb Ulliot '66 is a lecturer and consultant in sports and wilderness medicine. She is the author of several popular books, including The New Women's Running and Running Free. She has also written for Runner's World magazine and Women's Sport and Fitness Magazine. Soon after she began running seriously at age 30, Ulliot evolved into one of the nation's top female distance runners. Between 1974 and 1979 she was a member of the U.S. National marathon team. In 1988, at the age of 48, she ran the 26.2-mile marathon in her personal best time of 2:47:39, almost four minutes faster than her previous best, set at age 36.*

## *Prescription for Fitness:*

# Confessions of a Born-Again Athlete

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by Harvey B. Simon

**M**ay I ask my fellow HMS graduates for a consultation? The case is easy—all specialties may participate. The patient is a 34-year-old man who is entirely free of symptoms. You examine him and your findings are mundane; the only abnormalities are a blood pressure of 156/94 and a body weight of 200 pounds, exceeding ideal weight by 15 percent. You inquire further into his background and discover a stressful professional life, tobacco abuse which has been abandoned only recently, and a family history that includes angina and peripheral vascular disease before age 40 in his father, and sudden cardiac death before age 43 in his mother and uncles. No longer quite so bored, you order some lab tests: his hemogram, urinalysis, blood sugar, electrolytes, and creatinine are normal, but his cholesterol is 292 mg/dl despite avowed efforts to follow a low fat diet.

Your diagnosis: atherosclerosis waiting to happen. But your treatment options are fewer than you think; it's 1976, long before lovastatin and enalapril. Your prognosis: trouble ahead.

Because it's now 1989, you can get an instant 13-year follow-up. Happily, your prognosis was wrong. The patient has not had an MI or stroke. He remains asymptomatic. On physical examination, he looks less tense. Even more remarkably, his weight is now 168 and his blood pressure 130/84. Laboratory studies are unchanged apart from the cholesterol, which is now 204 mg/dl with an HDL of 91.

A nice result, to be sure. But you can't take credit for this one. Your patient has not been on medication,

and his caloric intake is actually even higher than before. What has occurred?

You take some additional history, finding that you overlooked another coronary risk factor that was present in 1976: sedentary living. More than simply sedentary, the patient was positively inert. But on July 4, 1976, he dusted off his virginal college sneakers and set out to jog. A mere 0.4 miles nearly sent him to the emergency ward, but the next day he tried again, then again, and again. By 1977 he was running marathons, and by 1981 he had won the New England Athletic Congress 50 Mile Silver Championship, demonstrating a 100-fold increase in physical work capacity in just five years.

This metamorphosis notwithstanding, the patient is not a world-class athlete. He did not slip into a phone booth to strip off his mild-mannered exterior. Far from being a superman, he is really quite an ordinary chap. You guessed it—he's me!

**E**xercise has changed my life. It has changed my health. In 1976 I was healthy (or so I thought) but not fit. Thirteen years later, I am healthy and fit. And my prospects for continued health seem excellent.

Exercise has changed my professional life. After graduation from HMS in 1967, I trained in medicine and infectious disease at Massachusetts General

Hospital and in immunology at the NIH. Returning to MGH, I joined our new primary care practice in 1973, and continued clinical research and teaching with the infectious disease unit. I continue to enjoy both activities, and I've recently taken on the second-year microbiology course in the HST curriculum.

But my personal experience with exercise has added a new dimension to my career. Astounded by the changes in my own body, I set out to study work physiology. Frustrated by the lack of an exercise option for my patients, I joined with Alex Leaf (then chief of medicine at MGH and now Ridley Watts Professor of Preventive Medicine at HMS), Steve Levisohn '66, Al Mulley '75, and Kris Nelson, RN to establish the Harvard Cardiovascular Health Center in 1979. From a humble start with 6 patients, we've now treated about 1,000 at our two exercise labs at MGH and our facility at Harvard's indoor track. Nearly one-third of my recent academic publications have been related to exercise and health. And, mostly in collaboration with Steve Levisohn, I've tried to spread the word about the benefits of fitness through magazine pieces and two books for the general public.

Exercise has also changed my personal life. My case history describes stress reduction, but the changes go far beyond the relief of tension. My wife, Rita, and our two daughters have become runners, so exercise has been a wonderful family pastime. We have traveled rather widely in pursuit of the perfect marathon. I've made many new friends from diverse, mostly non-medical, backgrounds.



Less easy to quantify is the change in my personality. Running has helped me become more out-going and open. In 1976, I could not have published my personal history (even if I had anything interesting to share back then). In 1988 my personal glasnost reached new extremes when Rita and I hosted a 10 kilometer road race and a party for 100 running friends, colleagues and patients to celebrate my 3,653rd consecutive daily run. (Psychiatric colleagues take note—I loved each of the 42,138 miles, and it was a great party.)

And now, in 1989, my openness will reach lunatic proportions as I'll have the temerity to go public with a portion of the doggerel I wrote for our party:

*Some of you know me well,  
Both my running and verse  
Now you'll have to decide  
Which trait is the worse.*

*For my friends who are new  
I would like to re-trace  
How a man, staid and stubby  
Could arrive at this place.*

*I came up in this world  
As a sloth and a slouch  
At the mere thought of running  
My feet would say "ouch."*

*In my school days, it's true  
No sport did I know  
The one thing I played  
Was my old radio.*

*On to Harvard for med. school,  
Where I got worried looks  
When I puffed and I sweated  
Just carrying books.*

*Next I married Rita  
And became an M.D.  
With her cooking, my eating  
There was sure more of me.*

*Then at last my wife noticed  
This was no longer fun  
I must choose, she insisted  
To eat or to run.*

*July fourth was the day  
The year 'seventy-six  
The event so unusual  
In my memory it sticks.*

*Without warning or notice  
Though my friends were agog*



Harvey Simon in the 1987 Boston Marathon.

Without rhyme, but with reason  
I set out to jog.

My pace was quite pokey  
Just four-tenths of a mile  
The pain was so awesome  
I could not even smile.

The next day I was hurting  
From head to my feet  
But my Rita insisted  
I must run, just to eat!

That's how I got started  
And my mileage did grow  
For I found I could eat more  
But my waist would not show.

Left, right to the table  
Left, right down the street  
I discovered my motto:  
"Love to run, love to eat."

Left, right: higher spirits  
Left, right: my weight fell  
Left, right: lower pressure  
Left, right: high HDL

These changes, astounding  
Led me to take stock  
My body felt younger  
Did I turn back the clock?

What's good for the doctor  
Should help patients as well  
But we had no health program  
I am quite sad to tell.

So with Alex and Kris  
With Al and with Steve  
We began the Health Center  
And it's thrived, I believe.

Now fine doctors and nurses  
Staff a program, that's neat  
But mostly, great patients  
Who succeed with their feet.

And to find inspiration  
Don't just hear what I tell  
Come and run with these athletes  
Who once were not well.

What made Harvey run? Not the advice of my doctor, for like most physicians I had none. Not my knowledge of exercise physiology, for like most physicians I had none. My poem is accurate: I started to run because of my wife.

But why did I know so little about the health benefits of exercise in 1976? More to the point, why do most of my colleagues know so little in 1989? The answer is simple: Exercise is one of the best-kept secrets in preventive medicine. One example: the National Heart, Lung and Blood Institute expert panel on cholesterol does not list sedentary living among the risk factors for coronary heart disease (1988, *Archives of Internal Medicine*).

Exercise occupies a scant position indeed in the HMS curriculum. To the best of my knowledge, the only formal lecture devoted to exercise and health is my hour in Alex Leaf's Nutrition and Preventive Medicine course. With so much to learn about molecular biology, magnetic resonance imaging, and the generations of antimicrobials begot by cephalothin, perhaps an hour of the curriculum is not so bad. But the course is an elective, attracting only 20 to 70 students each year.

Our clinical teaching is not much better. The little red "Guide to Patient Interview and Examination," which has launched countless HMS students into clinical medicine, instructs the student to ask about everything from "change in head size" to the "frequency, consistency, odor and color" of stools—everything, that is, except exercise history. And in my experience, bedside rounds rarely discuss sedentary living among the risk factors for atherosclerosis—much less exercise as a modality for rehabilitation or prevention.

Has exercise assumed its just place in the standard medical literature? Hardly. Among the standard internal medicine texts, only Rubenstein and Federman's *Scientific American Medicine* (1989) includes a detailed chapter on exercise and health (not entirely by coincidence; I wrote the chapter). *Cecil's Textbook of Medicine* (1985) also contains a chapter on exercise, but it constitutes only 2 of the book's more than 2,300 pages. And exercise does not rate even a cursory chapter in either *Harrison's Principles of Internal Medicine* (1987) or Stein's *Internal Medicine* (1983).

You might think that books devoted to ambulatory medicine would do a better job discussing ambulation. They do—but not uniformly. Goroll, May and Mulley's *Primary Care Medicine* (1987) contains a chapter on exercise and cardiovascular disease. Both Noble's *Textbook of General Medicine and Primary Care* (1987) and Barker, Burton and Zieve's *Principles of Ambulatory Medicine* (1986) contain similar chapters, and also include chapters on common

exercise-related injuries. But Branch's *Office Practice of Medicine* (1983) contains only a brief discussion of exercise in its chapter on risk factors associated with coronary heart disease.

Even the major cardiology texts vary widely in their coverage of exercise and cardiovascular disease. I'm sorry to say that Johnson, Haber and Austen's otherwise excellent *The Practice of Cardiology* (1980) neglects this area entirely. Braunwald's *Heart Disease: A Textbook of Cardiovascular Medicine* (1988) does contain a fine chapter on cardiac rehabilitation. In first place, though, is Hurst's *The Heart* (1986) with chapters relating to exercise for prevention as well as rehabilitation, and also a chapter on the athlete's heart.

Information about exercise and health is often overlooked, but it is available. Among textbooks of exercise physiology, for example, Astrand and Rodahl's *Textbook of Work Physiology* and Shephard's *Physiology and Biochemistry of Exercise* stand out.

Specialty journals devoted to sports medicine, cardiac rehabilitation and exercise physiology abound. And the standard internal medical journals do their share: in 1988, for example, the *The New England Journal of Medicine* published three original articles and one editorial devoted to exercise-related areas, *The Journal of the American Medical Association* carried three original articles and two clinical reviews, the *American Journal of Medicine* published two articles and one editorial, and the *Annals of Internal Medicine* carried three original articles, two reviews, and an American College of Physicians position paper.

We need to learn more about the health consequences of exercise. But we also have a pressing need to learn how to disseminate the knowledge which is already available to medical students and practitioners—and through them to the public.

## TRUE OR FALSE?

Just how much does the HMS graduate know about fitness and health? Here is a simple true/false self-assessment test which you can take in the privacy of your own home (no CME credits, alas).

1. Exercise reduces coronary risk, but sedentary living is a much less potent



risk factor than hypercholesterolemia, hypertension or tobacco abuse.

☐ True ☐ False

2. Exercise is effective for the primary prevention of coronary heart disease, but does little to reduce the risk of recurrent MIs and cardiac death in patients with established arteriosclerotic heart disease.

☐ True ☐ False

3. Exercise raises blood pressure.

☐ True ☐ False

4. Exercise predictably increases HDL cholesterol but has fewer predictable effects on LDL cholesterol levels.

☐ True ☐ False

5. Exercise improves pulmonary function.

☐ True ☐ False

6. If it is done correctly, resistance-training (Nautilus and other systems) is as beneficial for health and longevity as endurance training (jogging, biking, etc.).

☐ True ☐ False

7. Sudden cardiac death is more common during exercise than at rest.

☐ True ☐ False

8. Repetitive exercise can lead to left ventricular hypertrophy, bradycardia and EKG changes.

☐ True ☐ False

9. Exercise increases bone density.

☐ True ☐ False

10. Exercise-induced asthma is rare, but when it occurs, it prevents successful participation in competitive sports.

☐ True ☐ False

11. Exercise is good for the heart, but does nothing to prevent other important killers such as cancer.

☐ True ☐ False

12. Running may help prevent heart disease, but the trade-off is increased degenerative joint disease, especially of the hips and knees.

☐ True ☐ False

13. Exercise reduces blood sugar.

☐ True ☐ False

14. Exercise can produce intestinal and urinary blood loss.

☐ True ☐ False

15. Exercise can produce significant weight loss.

☐ True ☐ False

## ANSWERS

(One point for each correct response.)

1. **False.** According to a 1987 meta-analysis by the CDC, each of these factors increases the risk of coronary heart disease by a similar degree: sedentary living 1.9, hypercholesterolemia 2.4, hypertension 2.1, and cigarette smoking 2.5. Since sedentary living is at least two to three times more prevalent than any of these other risk factors, it could be argued that physical inactivity makes the most significant contribution to the epidemic of coronary heart disease in the United States.

2. **False.** A 1988 meta-analysis of 10 prospective randomized trials of exercise therapy after myocardial infarction, involving 4,347 patients, demonstrated a 25 percent reduction in both cardiac deaths and total mortality in the patients who exercised.

3. **False.** But it's a trick question. Isometric or static exercise (pushing against a fixed resistance, lifting heavy weights) does raise systolic and diastolic pressure, and can be hazardous in patients

with ischemic heart disease. But isotonic or dynamic exercise (walking, jogging, biking, swimming) generally produces only a modest rise in systolic pressure and can reduce diastolic pressure. Isotonic exercise is ideal for cardiovascular conditioning and risk-factor reduction. Moreover, repetitive isotonic exercise significantly reduces resting blood pressure, and should be combined with diet and stress reduction for effective non-pharmacological management of mild to moderate hypertension.

4. **True.** As little as 5 to 10 miles of jogging per week will elevate HDL cholesterol levels. HDL levels rise further with increasing exercise, plateauing at the equivalent of 40 to 50 miles of jogging per week: the effects of exercise are independent of other factors known to alter HDL levels such as diet, body weight, smoking and alcohol consumption.

5. **False.** The lung is one of the few organs that does not develop an adaptive response to exercise training. The "improved wind" experienced by fit people is due to improved cardiac output, enhanced oxygen-carrying of the blood, improved delivery of blood to skeletal muscle, and more efficient oxygen uptake and utilization by muscle. These changes can be quantified by a simple measurement, the maximum oxygen uptake ( $VO_{2max}$ ), which is the single best overall measurement of aerobic fitness.

6. **False.** Resistance training can be very beneficial for musculo-skeletal fitness. The result is a more pleasing physique, improved athletic performance, and (probably) a reduced risk of strains and sprains. All are worthwhile objectives—but they are not accompanied by improvements in aerobic fitness or reductions in cardiac risk factors. Nautilus training—even circuit training—does surprisingly little for cardiovascular and metabolic parameters.

7. **True,** but not as scary as it sounds. David Siscovick and his colleagues in Seattle demonstrated that sedentary men were 56 times more likely to have a sudden cardiac arrest during exercise than at other times. Habitually active men had a much lower risk during exercise, but they were still five times more likely to have a sudden cardiac arrest during exercise than at other times. That's the bad news. The good news is that despite their increased risk during exertion, fit men had a 60 percent reduction in overall risk of sudden death

## YOUR SCORECARD

12 or more: *marathoner*  
9 to 11: *runner*  
5 to 8: *jogger*  
7 or less: *couch potato*

as compared to sedentary men. And Kenneth Cooper has reported no sudden deaths in 374,798 exercise-hours at his center, including more than 1.2 million miles of jogging. This is particularly reassuring to me, since my lifetime total (my 13-year total) is a mere 49,000 miles.

**8. True**—but who cares. The “athlete’s heart” is not a disease, but a physiologic adaptation. Isometric exercise produces increased left ventricular mass, whereas isotonic exercise increases left ventricular volume. The athlete’s heart is a healthy heart, with more efficient contractions, increased stroke volume and markedly increased maximum pumping capacity.

**9. True.** Weight-bearing exercise in particular increases bone mineral content. Prospective trials have even demonstrated that exercise can be used to treat post-menopausal osteoporosis. One caution: competitive female athletes who exercise intensively enough to develop athletic amenorrhea have less bone calcium and are at increased risk for stress fractures.

**10. False.** Exercise-induced asthma is common, but usually responds well to medical therapy. Cromlyn sodium inhalation is the treatment of choice, but EIA can also be prevented by pretreatment with beta adrenergic agonists, inhaled ipratropium bromide or theophylline preparations. Even conventional asthma can be managed well enough to allow competitive sports in many cases. In fact, 11.2 percent of the 1984 U.S. Olympic athletes were asthmatics.

**11. False.** Rose Frisch and her colleagues at Harvard School of Public Health reported that women who were athletic in college experience approximately 50 percent less subsequent breast and re-

productive tract cancer. Other studies have demonstrated a significantly reduced risk of colon cancer in men who are physically active.

**12. False,** fortunately. At least five studies (three of which are very good) fail to demonstrate an increased incidence of degenerative joint disease in runners.

**13. True.** Exercise increases tissue insulin binding and increases insulin sensitivity and glucose uptake. In most cases, however, hepatic glycogenolysis and gluconeogenesis compensate to preserve blood glucose levels during exercise. Exercise has been used to treat diabetes mellitus since ancient times—but has been under-prescribed in modern times. Diabetics should be carefully screened for occult coronary disease and retinopathy prior to exercise, and should be monitored for decreasing insulin requirements.

**14. True.** Nothing is perfect, not even fitness. Up to 18 percent of marathon runners exhibit hematuria, and up to 22 percent have occult fecal blood loss. Both are benign conditions. Athletes with hematuria or intestinal bleeding should be worked up for other more serious causes of bleeding. A mild reduction of the hematocrit is common in athletes but is not usually due to blood loss. In fact, “athletic anemia” is not anemia at all, but a pseudoanemia caused by expanded plasma volume with preserved red cell mass.

**15. True.** But be careful here. It takes 35 miles of walking (or running; a mile is a mile) to burn just one pound of adipose tissue. Exercise will reduce body fat, but if you run five miles a day, yet eat for six miles a day, you’ll gain weight. And even when body fat declines, body weight may lag a bit because exercise

increases muscle mass, and muscle is more dense than fat.

As I have argued, exercise physiology and preventive cardiology are under-represented in the medical school curriculum and in the standard medical literature. The net effect is that doctors are inadequately informed about exercise, fitness and health.

Two consequences follow this lack of information. First: doctors are generally a slothful lot. A 1982 HMS faculty survey conducted by the *HMS Health Letter* revealed that less than half of us reported performing even one hour of aerobic exercise per week. And since three hours a week is considered optimal for health by 1989 standards, it’s clear that we have lots of room for improvement. Physician, run thyself.

The second consequence of insufficient physician information is that doctors have not assumed their proper role in patient education and public leadership. We have an obligation to evaluate the fitness of each patient and to prescribe for each a safe and effective exercise regimen. And, because exercise does have side effects, we should be prepared to recognize and treat the exercise-related problems which have not been prevented by patient education. On a larger scale, physicians should be leading a public campaign for fitness and other lifestyle modifications that will prevent disease.

My prescription for physician fitness is straightforward: learn about fitness, exercise regularly and preach what you practice. The physician in the age of molecular biology should be personally and professionally equal to the ancient insight of Hippocrates: “That which is used develops; that which is not used, wastes away.” And if the Greek physician does not persuade, perhaps the Roman poet Cicero will: “Exercise and temperance will preserve something of our youthful vigor, even into old age.” □

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*Harvey B. Simon '67 is assistant professor of medicine at HMS and is a founding member of the Harvard Cardiovascular Health Center at MGH. Among many other publications on fitness, he has written, with Steven R. Levisohn, MD, The Athlete Within: A Personal Guide to Total Fitness (1987, Little, Brown, and Company, Boston). Documentation for quiz answers can be found in his article: “Exercise, Health, and Sports Medicine” in Scientific American Medicine. 1988.*





# DOCTORS FOR DANCERS

## *The Show Must Go On*

by Lyle J. Micheli

**T**he young ballet dancer glides effortlessly across the stage. Her grace, poise and charm captivate the audience. Her execution of the arabesque and tendu are flawless. She is "on" tonight. What the audience does not know, and must not know, is that she is in agonizing pain from a stress fracture of her second metatarsal—the Lisfranc stress fracture unique to ballet dancers.

Perhaps she will see the company doctor tomorrow, if there is one. Or, more likely, she will have a "deep" foot massage, acupuncture treatment or more aspirin.

She may eventually heal this injury—by working around it, avoiding moves that stress it, even taking time off. If left to heal on its own, however, arthritis of this keystone joint of the foot may

begin, and one more promising career may be limited or cut short by one more undiagnosed and undertreated injury.

If we can believe national statistics, dance is the most popular exercise activity in the United States today. Certainly, if one includes those participating in aerobic and folk dance with classical ballet and modern dance, the number swells beyond proportion. These dancers, both professional and amateur, sustain rates of injury that rival those of any sports activity, and they have nutritive and metabolic needs that require expert advice and guidance.

Despite this, there are currently few physicians who express a specific interest in "dance medicine."

One might well ask if indeed there is a need for the sub-specialty now

# Karol Watson '89: Making Time For Dance

Karol Watson '89 didn't expect to continue dancing when she started classes at Harvard Medical School. But since her first ballet lesson at age 8, she hasn't been able to leave dancing behind for very long. Research medicine is her choice of career, but modern dance is her passion.

Watson took last year off from medical school to continue research in the laboratory of Judah Folkman '57 as an Andrus Fellow. But for her summer break in 1988, she was accepted to dance with the Alvin Ailey Dance Repertory Company in New York. She rehearsed daily from 8 AM to sometimes 11 PM, and performed at least once a week. Although she had been a principal dancer with the Zohar Dance Company in San Francisco while an undergraduate at Stanford, never before had she devoted herself exclusively to dance.

Much as dancing with Alvin Ailey was a dream come true, she says, "It reached a point of diminishing return for me. Dance has been my creative outlet, and when you turn your outlet into a job, it loses something."

At every transition point in her life, Watson has strongly considered dance as a career. Her parents have equally strongly urged otherwise. She now agrees with their advice. With

two career paths wide open, she's content with her choice of medicine.

"I really was torn between dance and medicine for awhile," she explains. "But dance is very much within you—it's narcissistic. It's hard to describe in words, but there's an element of giving to other people that is lacking in dance, but present in medicine. Medicine is more societal." Dance has brought her in touch with herself, she says, which at the very least has made her a better person.

A native of Los Angeles, Watson's first winter in Boston was a shock. "Walking, running and the normal things I took for granted to keep in shape, I couldn't do." She found again that dancing could co-exist with her studies. Almost every night, she either taught at the Joy of Movement Center in Cambridge or rehearsed with local companies. "It made it easier to sit still in class during the day."

In her dance world she is surrounded by dancers for whom dance is everything. Few other dancers know she is a medical student. "Dancers talk dance all the time."

On the other hand, most of her medical school classmates know she dances and many have attended her performances. "So many of my classmates do interesting things outside of medicine that it's almost a given."



Watson considered sports medicine as a specialty, "But once I got excited about research, I focused my energy in that direction." She enjoys the creative thinking involved in research. "Dr. Folkman teaches us to question things—that the possibilities are limitless."

As part of Folkman's team studying angiogenic activity, she has been investigating the changes in angiogenic capacity as cells pass from a normal to a malignant state. The hope is to identify early signs of malignancy. Watson was selected in 1988 to present her work at the HMS Soma Weiss Undergraduate Assembly. She continued these studies during the fellowship, which ended in January 1989.

She still takes and teaches dance classes. "I get grouchy after two weeks if I don't stay active." During a month off in February 1989, she not only worked on her thesis, but also rehearsed and danced eight hours a day in *Aida* at the Boston Opera Company. Though torn for so long *between* medicine and dance, she has finally found a place for both in her life. □

—Ellen Barlow





dubbed "dance medicine." Is there any difference between treating an injury to a dancer and anyone else? Is the approach to a 14-year-old dance student with bulimia any different from any 14-year-old with bulimia?

While there may be a variety of physician opinions regarding this question, dancers—both formal and informal, professional and amateur—seem to be of one mind. They very much want to be cared for by physicians who understand the specific demands of their activity, and who can weave the recommendations for recovery and resumption of activity into the framework of the dancers' regimens. We have learned that this understanding is central to effectively caring for athletes, properly diagnosing their injuries, and giving them meaningful advice on return to training or competition.

We first began seeing dancers in sports medicine clinics more than 15 years ago. While in some ways the occurrence of dance injuries and their management were quite similar to athletic injuries, there were a number of important differences.

The physician advising the dancer must be ever mindful of the aesthetic component of dance, and the dancer's perception of that aesthetic. Advising dancers to do certain exercises to treat an injury must include assurance that such exercises will not interfere with their ability to dance with beauty and grace.

The past 10 years, I have treated growing numbers of professional and amateur dancers. I have become convinced that the more I learn about dance and the particular demands of a

given dance technique or regimen, the better I am able to serve these patients and their special needs.

Ballet, with its prescribed vocabulary, is the best place to start. Even dancers primarily interested in modern or jazz dancing will often take a ballet class or two a week. They can usually describe the onset of their problems using ballet terminology. While folk dancing and aerobic dancing are further afield and have their own vocabulary for anatomically demanding maneuvers, careful questioning can usually elicit the anatomic structure or region being stressed.

A dancer complaining of back pain who is helped to recall that its onset was after a role that required repeated arabesque (which involves extreme hyperextension of the lumbar spine) is highly suspect for a spondylolytic stress fracture of the lower lumbar spine, not a "back strain."

In addition to patterns of overuse injury similar to those encountered in athletics, dancers can develop certain injuries unique to dance. An example easily comes to mind. A young dancer appears with a painful ankle. She is 16 years old, and already has been dancing for nine years. Over the last three years, she has taken classes four to five days a week, to the exclusion of other normal teenage activities. She wishes to become a professional ballerina, and is currently enrolled in the summer school of the Boston School of Ballet.

On examination, she has a discrete area of tenderness on the medial aspect of her ankle, two finger breadth's below the medial malleolus. This area becomes painful particularly with *réleve*; after

20 to 30 minutes of a technique or *pointé* class, it becomes so painful that she cannot continue the class. On occasion, she has the sensation of something catching or popping in this area. On rising in the morning, she complains of stiffness which gradually warms up as she walks to class. Since she began summer school three weeks ago and is now taking six hours of class a day rather than six hours a week, the problem has become so troublesome that it has effectively eliminated her from further class participation.

If she were a running athlete, *tibialis posterior* tendonitis or navicular stress fracture would lead the list of differential diagnoses. But the differential diagnosis of this complaint in this young ballet dancer is really quite different. Her pain may be due to a tendonitis of the flexor hallucis longus, which is a condition unique to female ballet dancers and not encountered in any other sport or physical activity.

As a result of the demands placed on it by *pointé* technique, the flexor hallucis tendon can become inflamed and injured as it passes through the fibrocartilaginous tunnel beneath the sustentaculum tali of the calcaneus. If the pain is ignored and left unattended, the tendon becomes entrapped in the sheath. We have seen several cases of frank rupture of the tendon at this site.

Included in the differential would be posterior impingement syndrome of the ankle, due to mechanical impingement of an *os trigonum* of the talus between the tibia and calcaneus. The *os trigonum* is an accessory bone at the posterior margin of the talus, which may be present in a third of the popula-



tion. In the ballet dancer, with repetitive demi-point or pointé posturing of the foot into hyperequinus at the ankle, mechanical impingement of this vestigial portion of the posterior margin of the talus may occur, with subsequent injury to adjacent bony margins and the posterior capsule of the ankle joint.

In ballet dancers, an additional factor may be progressive hypertrophy of these os trigona in response to repetitive mechanical trauma. Plain radiographs and radionucleotide imaging may be necessary to differentiate these two etiologies.

Once such a diagnosis has been made, initial therapy might consist of icing, anti-inflammatory medication, and well-directed physical therapy to restore the continuity of motion in the tendon and decrease the inflammatory response. On occasion, surgical tenolysis of the flexor-tendon sheath may be necessary. Or the os trigonum may have to be removed.

If one compares the demands on the body of the professional ballet dancer with those of the professional athlete, such as in football or basketball, the contrast becomes even more striking. The professional dancer may rehearse or train eight to ten hours a day, six days a week. No professional athlete trains at this level of intensity. The potential for overuse injuries from repetitive athletic activity of any kind—the tendonitis, the bursitis and stress fractures—are the particular bane of the dancer.

Lack of appreciation for these demands in dance has eliminated many from even recreational dance activities. We have seen stress fractures of the hip in clog dancers and completely displaced stress fractures of the tibia in ballet dancers.

An additional complicating factor when caring for either the professional or serious amateur dancer is the time-honored, respected show business maxim that "the show must go on." We have encountered many dancers who have continued to train and work with pain that would have stopped most athletes weeks earlier. If dancers have confidence that the physician understands the demands of dance and their desire to continue dancing, however, they are prepared to seek and follow proper medical advice.

Dancers are wonderful patients, indeed. It is rewarding to work with patients who are well aware of the body and how it moves, and of the response of the body to physical demands. They know the importance of warm-up and stretching before beginning progressive



training, and of the interaction between power, strength and flexibility in human movement. □

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*dren's Hospital. He has been the attending physician for the Boston Ballet Company for the past 12 years, and is also a medical consultant to the Boston Ballet School. Currently he is president-elect of the American College of Sports Medicine.*

### For Further Reading

*Dance Medicine Health Newsletter* (quarterly). Hanley and Belfus, Inc., 218 South 13th St., Philadelphia, PA 19107.

*Medical Problems of Performing Artists* (quarterly). International Center for Dance Orthopaedics and Dance Therapy, 7922 Oceanus Dr., Los Angeles, CA 90046.

*The 1984 Olympic Scientific Congress Proceedings: The Dancer as*

*Athlete.* Broekhoff J, Ellis MF, Tripps DG (eds.), Champaign, IL, Human Kinetics Publishers, 1986.

*Clinics in Sports Medicine: Injuries to Dancers.* Nov. 1983, Philadelphia, W.B. Saunders.

*Dance Medicine: A Comprehensive Guide.* Ryan AJ, Stephens RE (eds.), Chicago, Pluribus Press, 1987.

*Science of Dance Training.* Skrinar M, Clarkson PM (eds.), Champaign, IL, Human Kinetics Publishers, 1988.



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# Where There's Smoke, There's Fire

An Interview with Allan Brandt

by Debra J. Trione

**DT:** *Can we go back to the beginning? When did people first start smoking cigarettes?*

**AB:** One of the interesting things I think people don't realize is that cigarettes haven't been around very long. The principle uses of tobacco before the 20th century were in cigars, tobacco and snuff, and it's only really in the 20th century that the cigarette has become the principle use of tobacco. The industry expanded from something like 50 per capita in 1900, to 600 in 1920, and by 1970 to something over 4,000 cigarettes plus per capita. So we're talking about the tremendous growth of a major industry as well as a remarkable change in popular consumer behavior. From the time cigarettes were mass marketed,

there was a great deal of concern, especially on the part of moral reformers, about their health implications.

*What about that fuzzy area between moral and health concerns?*

Today we make a very clear distinction between what we think of as health

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concerns and what we think of as moral. But that's a relatively recent division, especially within the medical profession. If you go back to the early 20th century, people assumed that good morals and good health were almost the same thing—that if you promoted good moral behavior, people would be healthy.

One of the ways I got interested in this subject was my earlier work on the history of sexually transmitted disease. I was very interested in the way medical professionals thought about morals and health. A lot of medical professionals in the early 20th century said the answer to the STD problem was simple. If people behaved morally, we wouldn't have to worry about these diseases.



Some of those same physicians would say the same thing about smoking. The cigarette industry today for instance is eager to go back to the early 20th century and say: "There have always been these moralists who didn't want anyone to have any pleasure. They tried to stop smoking in the early 20th century, and they're trying to stop it now. There's no difference between Surgeon General Koop and some of the early anti-cigarette crusaders."

*What kind of adverse behavior used to be associated with cigarette smoking?*

Very similar to alcohol. By the time the 18th amendment prohibited the use of alcohol in the U.S., there was a very active anti-tobacco crusade. They were called the twin evils—alcohol and cigarettes.

*But alcohol and cigarettes don't produce anywhere near the same physiological effect. Cigarettes can actually have a stimulating effect. Why were they associated with degeneracy?*

Idleness. Alcohol and tobacco were both seen as habits of idleness and unnecessary consumption. In a culture that emphasized productivity, hard work, and the idea that people should be conscientious and not wasteful, the cigarette became the preeminent symbol of wastefulness for pleasure. It's very interesting that there was a cultural transformation from the 1870s, when the first cigarettes were mass-produced, to the 1920s. It was a transformation from a society that emphasized the values of productivity to a society that emphasized the values of consumption and consumerism. The worst thing you could say about a person in 1870 was that they were indulgent, they were unproductive, idle and self-preoccupied. Then in the 1920s, when you began to see the early advertisements for cigarettes, they often said things like "Indulge in a Lucky: The Most Pleasureful of Cigarettes." But to seek pleasure openly and to indulge required a powerful cultural transformation.

*What caused that transformation?*

Advertising alone didn't cause it. But advertising reflected and encouraged it. I think what caused it is the critical historical question. It really has to do with very basic changes in the society and the economy between that period of the 1870s, which was the beginning of mass industrialism in the U.S., and mass urbanization. Obviously, World War I had an important effect; soldiers

were given cigarettes in their rations, and many returned home as committed smokers.

By 1920 more Americans lived in cities than rural areas and the cigarette was an appropriate social behavior for urban life. The cigar, which takes a long time to smoke, was associated with gentlemen who smoked them after major meals. The cigarette was a kind of easily portable smoke—you can carry it anywhere. Smoking breaks became one way of measuring time in large corporations. You can smoke a cigarette in a matter of minutes as opposed to an hour. So there was a change from a kind of elite leisure use of tobacco—or use of tobacco that would have been socially inappropriate in an urban, corporate society, like snuff or chewing tobacco—to a form of tobacco that people could use in urban, industrial life.

The cigarette was in that sense the perfect invention for the 20th century. And it's interesting how cigarettes have come to be advertised. So many of the ads show the autonomous, rural individual. But the person who smokes is very rarely like the Marlboro Man. Usually he or she works in a relatively confined urban workplace.

*Has cigarette smoking always been a primarily urban behavior?*

I don't have good data on urban versus rural cigarette smoking, but cigarette smoking was driven by the engines of mass national advertising, and those ads in many ways were meant to appeal to urban dwellers. The cowboy has tremendous appeal to the urban dweller, and cigarettes were promoted by inviting an identification that was often at odds with the lives of those who smoked. I think the Marlboro Man is probably the best example of that.

*Can you trace the way cigarette advertising has changed? Early on advertisements tried to contradict the idea that cigarettes were a health hazard, but more recently they've changed their tune. They say, Well, if you do smoke, this is what you ought to smoke.*

One of the recurrent themes throughout cigarette advertising has been a recognition that people are concerned about the health risks of the cigarette. The advertisers of course have tried to encourage smokers to deny there are any health risks. So very early, as early as the 1920s, one of the ads said: "More Doctors Smoke Luckys Than Any Other Brand." Through the 1940s, when more doctors smoked Camels than any other brand, there were a series of ads that

reflected a recognition on the part of cigarette companies that people were concerned about the health risks. And the companies concertedly told the public: You need not be concerned. The cigarette companies actually advertised cigarettes in the medical journals, directing their pitch specifically to doctors.

*What was their sell line?*

These particular ads were very praiseful of the medical profession in general, so that in a sense they tried to create an alliance between the tobacco companies and the medical profession. There were very positive images of doctors. The other thing they said was that doctors smoke and doctors' patients smoke. "For your patients who smoke, recommend our pipe tobacco." "For your patients who have smoker's cough, we recommend a change to our particular brand." There are a lot of ads like this that show doctors smoking. The cigarette companies promoted this, because they knew that if your doctor smoked, it was a clear signal to patients that this was not a serious health risk.

One of the interesting ironies is that to see a doctor smoking today is paradoxical. Doctors who smoke often do it in shame, in private, because of the high disregard for a clinician who smokes. But in the '30s and '40s it was common to see a doctor smoke, and in many official portraits—photographic portraits for alumni magazines or departments—they were often pictured in their white coats, with their stethoscopes and their cigarette in hand. The fact that hundreds of thousands of doctors quit smoking in the '60s and '70s was a major attack on the cigarette.

*How did the message that cigarette smoking was harmful to your health get out to the public?*

Clearly the Surgeon General's Report of 1964 had an enormous impact, and of course doctors were the first to really integrate what that report meant. It had always been thought that smoking in excess could cause some problems, but after the first Surgeon General's Report, it became *de rigeur* to ask a patient: "Do you smoke?" Even before the report, however—by the middle of the 1950s—the medical literature was becoming more and more clear about the risks of smoking. What the Surgeon General's Report did was to effectively and compellingly draw together all this literature. And it started quite a remarkable revolution in attitudes and practices about the cigarette. It's now



been a quarter of a century since that first report.

*Can you describe some of the early large-scale studies that were conducted on the health risks of smoking?*

Some epidemiologists began to perceive the possibility that smoking was a serious health risk as early as the 1920s. And an early study on cancer reported that people who smoke may have a higher incidence of cancer. Usually people cite a major article by a Johns Hopkins biostatistician, Raymond Pearl, which appeared in *Science* in 1938, as the first major article showing that smokers die earlier. But the first major epidemiological studies on which our knowledge of smoking and disease is based appeared in the late 1940s. It was on the basis of those studies that people came to the conclusion that smoking was the principle risk for lung cancer.

But that first Surgeon General's Report, I would argue, was a watershed in the history of smoking. Before that time, there were a lot of data. But it was putting that data together and publicizing that really led to a major change in attitudes about health and behavior. My argument would be that that first Surgeon General's Report was the first major focus that related a particular behavior to one of the most serious health risks, namely cancer. And that was the beginning of a cultural revolution that would emphasize individual responsibility for health.

*That sounds like a very big change.*

Part of what I'm talking about is the revolution in running and physical exercise, the revolution in nutrition and the recognition that what an individual eats can have a fundamental impact on health. In a sense, this really followed the reports on cigarette smoking. The forerunner of the health consciousness we saw evolve in the '70s and early '80s was really the concern about cigarette smoking. It was a major shift in the way people thought about health and the causes of serious diseases.

*Before epidemiology and this revolution you've been talking about, what did most people think caused lung cancer?*

There had been a long historical debate about what causes cancer. The word cause is the complicated word here, and it remains complicated. There are still people in medicine who refuse to accept the statement that cigarette smoking causes lung cancer. They will

say that cigarette smoking is associated with cancer, it's a risk factor for cancer, but their notion of cause is a traditional one—that in every instance A must lead to B. And of course we know that in many instances an individual may smoke and not get lung cancer. Some people would say that on that basis alone, you can't say that cigarette smoking causes cancer. There is this issue of statistical inference: How powerful is statistical inference within biomedicine? It's a very important component of biomedicine today, but it wasn't always.

Today when physicians learn how to practice medicine, they are learning that diseases have a statistical range, that if you judge by only one case, you may very well misread what's going on. But to say that cigarette smoking causes lung cancer because it's so highly and powerfully associated with lung cancer is part of a change in biomedicine that continues to have some detractors. There are still those—especially in the tobacco industry, not surprisingly—who would say, "All we have are statistics." Well

statistics can be very powerful and meaningful, and to discredit that is to really discredit something we rely on in biomedicine.

*Now that we have defined smoking as a public health risk, what have we been able to do about it?*

There has never really been the political will or force to close down the enormously lucrative tobacco industry. What the federal government did was label cigarettes, regulate advertising and ban broadcast advertising for cigarettes. They developed educational programs to inform the public about the risk of cigarettes, and school interventions to discourage children from beginning to smoke. They have also funded research on how to help people quit smoking. This vigorous public health response was often contested by the cigarette industry, and federal subsidies for the tobacco industry have been part of public policies as well. So you have a federal government that is often in conflict with its own policies. On the one hand it discourages smoking, but on the other it subsidizes tobacco growing.

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*How has the tobacco industry actually exerted pressure on politicians?*

The tobacco industry just about invented the Political Action Committee. They've been one of the most powerful lobbies in this century. They set up the Tobacco Institute when there really began to be a considerable amount of data about smoking's risk, in the 1950s. And the institute has been the principle lobby for tobacco since that time. So that's made it difficult to put through the kind of concerted anti-cigarette legislation that's often been proposed in Congress. For instance, when labels are set, they always turn out to be more lenient than when originally proposed.

*A couple of important things happened in 1971, didn't they? The Surgeon General's label changed from "may be hazardous to your health" to "is dangerous to your health," and there was legislation to ban broadcast advertising for cigarettes. I read somewhere that the tobacco industry actually applauded this ban. Is that true?*

They never actually applauded the ban, but they did eventually acquiesce. What happened was really very inter-

esting. In 1968 there was a consumer lawyer named John Banzhaf, who sued the Federal Communications Commission. He claimed that cigarettes had now become a political issue, and that therefore, the networks had to give time equal to the cigarette ads for the other point of view. The equal time rule on television says that if a politician buys half an hour, then they have to supply, or make available, a half hour to a responsible alternative view.

As a result of the FCC ruling, the national networks had to give public service broadcasts opposing cigarette smoking a percentage of the time that was actually bought by the cigarette companies for their ads. So for a three-year period, during prime time television, there was an enormous number of public service announcements against cigarettes. One showed a father with his son. The father skips and the son skips, and the father picks up a rock to skip it on the water, and the boy does the same. And the father sits down to light up a cigarette and the kid picks up a cigarette. And then the ad says: "Like father like son." You know, the guilt factor. These were very effective ads.

Cigarette consumption began to fall during that period. So the tobacco industry knew by 1971 that if it pulled its ads off the broadcast media, the networks would no longer be compelled to broadcast public service announcements in prime time. I don't know the exact figure, but I think the anti-tobacco forces may have gotten as much as \$40 million worth of free advertising during that period. It was unprecedented. So suddenly the tobacco lobby told its people not to oppose the ban on cigarette ads anymore. With the public service announcements off prime time TV, consumption began to climb again. It showed that concerted public service announcements in prime time *can* have an impact.

*What do you think about Surgeon General Koop's recent announcement that nicotine is an addictive drug? In the middle of so much political attention on the drug abuse problem in America, the word addictive seems pretty loaded.*

I heard a story about this. At the press conference where Koop announced that cigarettes were addictive, one of the reporters asked Koop's assistant: "My wife smokes cigarettes. Are you saying that my wife is a drug addict? Are you going to tell 29 million Americans who continue to smoke that they are drug addicts?" And of course the spokesman for the surgeon general was uncomfortable. He said "No, we're saying that it is addictive." So there are these subtle dimensions in which words play a powerful role.

The fact is that cigarette smoking mirrors most of the ways we've come to define physical addiction. You develop a tolerance for nicotine. If you stop, you have withdrawal symptoms. People who use cigarettes find that they have a biological, as well as a psychological-social, problem. But really any kind of addiction is a biological-social phenomenon. It doesn't happen just because substances are biologically addictive, it happens because of the entire social and cultural context in which various substances come to be used.

It's part of the process of delegitimizing tobacco to say that it's addictive; it puts it in a class of drugs, rather than in a class of substances that people can use freely. In the earlier period I studied, people talked about smoking as a habit. But I think we are now watching a process in our culture in which cigarette smoking is becoming increasingly defined as one area of substance abuse. □



*William Southmayd '68:*

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# FROM ATHLETE TO ENTREPRENEUR

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by Sarah Jane Nelson

Given the growing enthusiasm and frequency with which Americans engage in regular sports activities, it comes as little surprise that there are now approximately 1,000 sports medicine clinics scattered across the United States. Most are individual operations, affiliated with hospitals or group practices.

William Southmayd's SportsMedicine Systems, Incorporated is a nationwide chain of clinics that functions on a larger scale than the regional enterprises. It also differs from the sports medicine pool in that it is owned and operated by physicians rather than managed from afar. "No physician is an employee. They are partners," Southmayd '68 explains. They each run their own clinics, and are shareholders in the company.

When Southmayd opened his first sports medicine clinic in 1976, patients came to the Brookline clinic from 32 states and 9 different countries. They were both professional athletes and casual sports enthusiasts.

The start-up of a new Boston clinic in 1983 was the outgrowth of the Brookline clinic's success. In 1984 Southmayd and business partner William Shea received the necessary venture funding to get SportsMedicine Systems on its feet. There are currently seven SportsMedicine clinics: in Boston, Brookline, and Haverhill, Massachusetts; Columbus, Ohio; Princeton, New Jersey; Louisville, Kentucky; and Portsmouth, New Hampshire.

In addition to his clinical work, Southmayd is responsible for seeking out the appropriate doctors to start new centers. The chosen few are generally below 40 years of age, and all have been intercollegiate or professional athletes at one time or another. As an undergraduate, Southmayd himself was

a player and captain of the Harvard football team.

Chief Executive Officer Bill Smith takes care of most business matters for SportsMedicine Systems, including marketing and financial aspects, so that Southmayd and his medical partners have more time for medicine itself. "It's very difficult for physicians who have no business training to run group practices. Doctors thrive in this type of setup, being left alone to care for patients." This system "allows doctors to practice medicine without having to do everything else," Southmayd says that just as professional ball players can be distracted from their sport by girlfriends, publicity, and other things, physicians tend to get sidetracked by business matters.

Sports medicine has its own set of challenges: "There's always a time pressure for us. Most of the people we see have been to two or three doctors before us, and been frustrated." They're ready to get back to sports activities, and aren't happy with the give-it-a-rest approach. Boston Red Sox team physician from 1978 to 1981, Southmayd is well acquainted with sports psychology, and these mental insights have been valuable to him in his clinical work. Inevitably, there are times when he must break bad news to athletes, as with a defensive lineman from Bowdoin whose football career ended with a neck injury. "I try to put it into perspective for them. Everyone stops being a competitive athlete at some point."

Another problem specific to sports medicine is the use of steroids, cocaine and other artificial, so-called "performance enhancers." Much attention is

devoted to anabolic steroids in *The Sports Performance Factors* (1985), a book of which Southmayd is a co-author:

"Although they may produce strength gains, anabolic steroids also have serious medical side effects, and we strongly oppose using them." Later on, the authors add, "Anabolic steroid consumption has been associated with premature closure of the growth plates in bones, atrophy of the testicles and some forms of liver cancer." The book takes a stand against blood doping, receiving blood transfusions of red blood cells, another popular performance enhancer. Prior to this book, Southmayd, also co-authored *Sports Health: The Complete Book of Athletic Injuries*.

According to the company's marketing research, 75 percent of SportsMedicine patients are recreational/weekend athletes, about two-thirds of whom are men. Southmayd, seated amidst the polished surroundings of the downtown Boston clinic at One International Place, is the first to admit that SportsMedicine clinics cater to upwardly mobile baby boomers, who can afford a medical facility that offers everything from X-ray and ultrasound machines (for emergency use), to a well-supplied orthopedics room, hot tub, and thousands of dollars worth of exercise therapy equipment—not to mention nine orthopedists, a nutrition counselor, and an impressive skyline view.

Since the opening of his first sports medicine clinic in 1976, the company has grown 20 percent annually. Southmayd is aiming for 20 centers by 1992. Nor does he feel that expansion will jeopardize the quality of the clinics. The newly established human performance lab at the Boston center is just one example of the ways in which "the large centers tend to cross fertilize and share ideas." □



# ON THE IMPORTANCE OF PHYSICAL EDUCATION



by John C. Warren



Nature has destined that the physical and intellectual education of man should be conducted in very different modes. The culture of the mind requires the early, constant and well-directed efforts of an artificial system. That of the physical faculties is fully effected by the powers of unassisted nature, the exterior of health may remain a little longer, although the destroying principle is working in the heart. Should a woman be called on to be a mother, then comes the trial of her strength. The fruit, so fair without, is then found decayed within, when scarcely matured. Next, the roses of the countenance wither; the limbs are feeble and tottering; the vivacity is extinguished; the whole system undermined, and ready to fall on the first impulse. Of what use now are all the finery of accomplishment, and the rich stores of literature and of sci-

ence, the fruits of so many years' labor? They are all wasted, and perish unemployed.

What I have now stated as the result of the mode of female education in use at present, is not a picture of the imagination; it is a fair representation of what we are compelled to encounter, in almost daily experience.

My wish now is, to point out some of the principal ways in which literary pursuits may be destructive to health; and also to show what measures might be adopted to prevent these pernicious consequences.

Action is the object for which organization was created. If the organs are allowed to remain inactive, the channels of life become clogged; and the functions and even the structure get impaired. Young animals are filled with the desire of motion, in order that the fluids of the body may be forced rap-

idly through their tubes, the solids thus elongated and enlarged, and every part gradually and fully developed.

The immediate consequences of action on the bodily frame are familiar and visible to daily experience. Observe the sinewy arm of the mechanic. The muscles are large and distinct; and when put in motion, they become as hard as wood, and as strong as iron. Notice those who are accustomed to carry considerable weights on the head. The joints of the lower limbs are close-set and unyielding; the frame perfectly erect, and the attitude commanding. In the cultivator of the soil, though the form may be vitiated by neglect, you may observe that the appearance of every part is healthful, vigorous, and well fitted for labor.

While all of us are desirous of possessing the excellent qualities of strength, hardiness and beauty, how defective are our systems of education in the means of acquiring them? In the present state of civilization, a child, soon after it can walk, is sent to school; not so much for the purpose of learning, as to relieve its parents of the trouble of superintending its early movements. As he grows older, the same plan is incessantly pursued and improved on, till a large part of his time is passed in sedentary pursuits and in crowded rooms. In the short intervals of mental occupation, the boy is allowed to follow the bent of his inclinations, and seek in play that exercise which nature imperiously demands. The development of his system, though not what it was destined to be, is attained in a certain way; and he is exempted from some of the evils, which fall heavily on the other sex.

The female, at an early age, is discouraged from activity, as unbecoming her sex, and is taught to pass her leisure hours in a state of quietude at home. The effects of this habit have been already spoken of in general terms; and I would now point out some of its results in a specific manner.

In the course of my observations, I have been able to satisfy myself that about half the young females brought up as they are at present, undergo some visible and obvious change of structure; that a considerable number are the subjects of great and permanent deviations; and that not a few entirely

*Figures are from "Exercise for Ladies" by Donald Walker (London: Thomas Hurst, 1836), "A Course of Calisthenics for Young Ladies in Schools and Families" (Hartford: H. and F.J. Huntington, 1831) and "Treatise on Gymnastics" by Charles Beck (Simeon Butler, 1828). Courtesy of Rare Books, Countway Library.*



lose their health from the manner in which they are reared. The proportion of those who fall under the first description, I have already stated. The amount of the two last, it is impossible to ascertain with preciseness. I can venture to say, that it is sufficient to constitute a powerful claim on the attention of those engaged in the management of young persons.

The general causes of these derangements are those things that weaken the constitution. They may be physical or mental. Among the most important physical causes, are want of the exercise proper to develop the powers of the body, and the taking of food, improper in quantity or quality. The mental causes may be a too constant occupation of the mind in study; the influence of feelings or passions of a depressing nature, etc.

The facts, that show the want of exercise to be one of the greatest causes of these affections and of the weakness that induces them, are very numerous. On the one side, we observe that young people, brought up to hardy and laborious occupations, whether they are males or females, do not suffer in this way. The sons and daughters of farmers and laborers, for example, never exhibit the deformities spoken of, except in cases where there is a great scrophulous defect, by inheritance.

A still more remarkable fact of a general nature may be seen on a comparison in this respect between the two sexes. The lateral distortion of the spine is almost wholly confined to females, and is scarcely ever found existing in the other sex. The proportion of the former to the latter is at least nine to one. In truth, I may say that I have scarcely ever witnessed a remarkable distortion, of the kind now spoken of, in a boy. What is the cause of the disparity? They are equally well formed by nature; or, if there be any difference, the symmetry of all parts is more perfect in the female than in the male. The difference in physical organization results from a difference of habits during the school education. It is not seen till after this process is advanced. The girl, when she goes from school, is, as we have before said, expected to go home and remain, at least a large part of the time, confined to the house. As soon as the boy is released, he begins to run and jump and frolic in the open air, and continues his sports till hunger draws him to his food. The result is, that in him all the organs get invigorated, and the bones of course become solid; while a defect exists in the other, proportionate to the want of physical motion.

A question may fairly be asked why these evils are greater now than formerly, when females were equally confined? The answer, in reference to the young females of our country, is, that



they then took a considerable share in the laborious part of the domestic duties; now, they are devoted to literary occupations, of a nature to confine the body and require considerable efforts of the mind.

The operation of mental causes on the bodily frame is not unknown to any of us; though they may not perhaps have been thought, in regard to education, to be of very great importance. As it is not in my power to enter fully into the subject, I would barely present it for your consideration.

The effect of anxiety, grief, and other feelings, in diminishing strength and wearing away health, are quite familiar. The loss of property and of friends, has been known to bring on diseases; and it has sometimes happened, that an agreeable reverse or a favorable incident has speedily removed them. Confidence in a physician is a great help towards receiving benefit from his prescriptions; and many of the cures wrought by empirical or quack medicines, are to be attributed rather to the operation of the mind, than to the action of the medicines on the disease.

The production of physical changes in a sudden and sensible way, by the action of moral causes, is compara-



John Collins Warren



tively rare, and difficult to comprehend. Yet medical men do sometimes have an opportunity of observing changes effected by this power, which might appear incredible, and almost miraculous, to those not aware of the force of mental operations on the human organs. I could adduce many such cases. Perhaps it will be proper to state one or two in detail.

When, some years ago, the metallic tractors were in the height of their reputation for the cure of diseases by external application to the part affected, the following experiment was performed by



Dr. Haygarth, of Bath. Two tractors were prepared, not of metal, but of a substance different from the genuine tractors, and made to resemble them. These were applied, in a number of instances, with all the good effects of the real tractors. Among other remarkable cures was that of a person with a contraction of the knee joint, from a disease of six months' duration. After a few minutes' application, this man was directed to use his limb, and, to the surprise of all present, he was able to walk about the room. Such instances are not very unusual. Many empirics succeed by calling into action the same principle. The patient, after a number of contortions of the part affected, is directed to make use of his limb; and though this call on his imagination does not infallibly succeed, it is not wonderful that it occasionally does so.

I will relate another case of this kind. Some time since, a female presented herself to me, with a tumor, or swelling of the submaxillary gland of the neck, which had become what is commonly called a wen. It was about the size of an egg, had lasted two years, and was so very hard, that I considered any attempt to dissipate it by medicine to be vain, and advised its removal by an operation. To this the patient could not bring her mind; therefore, to satisfy her wish, I directed some applications of considerable activity to be made to the part, and these she pursued a num-

ber of weeks, without any change. After this, she called on me, and, with some hesitation, begged to know, whether an application recommended to her would in my opinion be safe. This consisted in applying the hand of a dead man three times to the diseased part. One of her neighbors now lay dead, and she had an opportunity of trying the experiment, if thought not dangerous. At first, I was disposed to divert her from it; but, recollecting the power of the imagination, I gravely assured her she might make the trial without apprehension of serious consequences. A while after, she presented herself once more, and, with a smiling countenance, informed me she had used this remedy and no other since I saw her; and, on examining for the tumor, I found it had disappeared.

The possibility of operating powerfully on the corporeal organization of moral causes being admitted, it is clear that the long exertion of intellectual efforts, and still more the frequent action of depressing passions, may, and even must, have a great influence on the condition of the body, at the flexible period when education and growth are going on together. A close and constant occupation of mind, too long continued, lessens the action of the heart; and a languid circulation, thus being induced, prevents the full growth of the body. Depressing passions act more conspicuously. You may possibly have noticed, though the case is rare in this country, the condition of children subjected to a persevering system of harshness at home. They are pale and shrivelled, and their growth is checked.

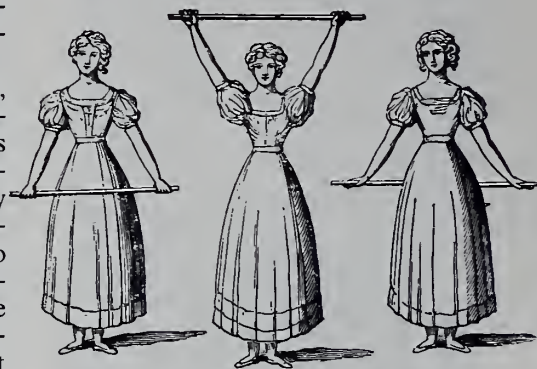
In the present modes of education, great pains are taken to excite the imagination by competition. These efforts are attended with but too much success in susceptible minds. An anxiety to excel becomes the predominant passion. The health, the sports, and too often the friendships of youth are sacrificed to the desire of surpassing those around. Then this becomes an all-absorbing passion, the result is most unfriendly to physical organization; and a multitude of fine constitutions are ruined by it, in both sexes.

The application of the system of rivalry to the softer sex, I speak with submission to greater experience, appears to me fraught with mischief. It inflames the imagination, festers the passions, and poisons the happiness of the brightest days of life; and since the very highest grade of literary acquirement is not essential to the duties of the sex, it seems as unnecessary as it is pernicious.

Having adverted to the nature and the causes of some of the defects that arise from want of attention to physical education, I shall now throw out some hints, as to the modes to which it may be improved.

Towards a perfect system of education, it is necessary there should be a balance preserved between physical and intellectual cultivation. When the mind is closely occupied, the body should be carefully guarded. If the pursuits of the former are severe and absorbing, those of the latter should be cheerful and relaxing. Instead, then, of abandoning the physical to the intellectual culture, it should be increased in the same ratio, and followed with the same earnestness.

Exercise is so material to physical education, that it has sometimes been used synonymously, though it really constitutes only a part of it. In order that exercise may have its due operation, it must begin at the earliest period of life, and of course, the parent must, in this, act the part of instructor. He must take pains to have the infant carried into the air, every day, and in every season; for, whatever may be the dangers of such a course, they are in the end less than those incident to the accidental exposures of a delicate constitution. In the earlier years, the dress should be arranged so as to allow that use of the body and limbs, to which nature prompts, with freedom, and without impropriety. When children are sent to school, care should be taken that they are not confined too long. Children

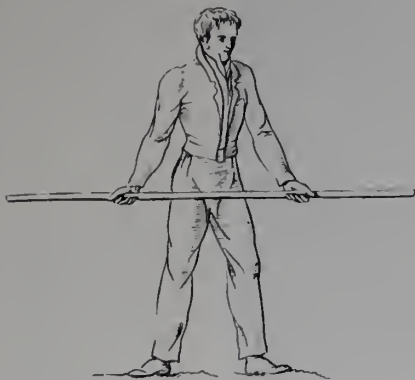


under fourteen should not be kept in school more than six or seven hours a day; and this period should be shortened for females. It is expedient that it should be broken into many parts; so as to avoid a long confinement at one time. Young persons, however well disposed, cannot support a restriction to one place and one posture. Nature resists such restrictions; and if enforced, they are apt to create disgust with the means and the object. Thus children learn to hate studies that might be rendered agreeable, and they take an aversion to



instructors, who would otherwise be interesting to them.

The postures they assume while seated at their studies, are not indifferent. They should be frequently warned against the practice of maintaining the head and neck long in a stooping position; and the disposition to it should be lessened by giving a proper elevation and slope to the desk; and the seat should have a support or back of a few inches, at its edge. The arms must be kept on the same level and there should



be room to support them equally, or the right will be apt to rise above the left, from its constant use and elevation. A standing posture in writing and studying, is not commendable for young persons. The secret of posture consists in avoiding all bad positions, and avoiding all positions long continued.

As young persons advance in age, and as the disposition to motion naturally diminishes, it becomes important to encourage and provide for it, especially in females, and in young men of studious character. Instead of restraining their movements, and blaming the disposition of frolic, they should be allowed and advised to it, at proper times, and in becoming modes.

Next to walking in the open air, the best exercise for a young female is dancing. This brings into action a large part of the muscles of the body and lower limbs, and gives them grace and power. The mode in which I wish to recommend its use, is not in balls and parties and crowded assemblies, but at home, alone, or with two or three friends, or in the domestic circle. As this practice does not give motion to the upper limbs, and as the exercising them is too apt to be neglected, it is important to provide the means of bringing them into action, as well to develop their own powers, as to enlarge and invigorate the chest, with which they are connected, and which they powerfully influence.

The best I know of is the use of the triangle. (The triangle is made of a stick of walnut wood, four feet long, an

inch and a half in diameter. To each end is connected a rope, the opposite extremities of which being confined together, are secured to the ceiling of a room, at such height as to allow the motion of swinging by the hands.) This admirably exerts the upper limbs and the muscles of the chest, and, indeed, when adroitly employed, those of the whole body. The plays at ball with both hands, and that of dumb bells, are useful. The parallel bars afford a very fine exercise for the muscles of the body and upper limbs. Battledoor I should recommend to be played with the left hand as well as the right, a habit, like all others, acquired by due practice.

While I particularly mention these, I should advise as great a diversity as possible, in exercise and amusement, so that, when the mind or the muscles get fatigued with one, they may take up another with fresh ardor. Every seminary of young persons should be provided with the instruments for those exercises. They are not expensive, occupy but little room, and are of unspeakable importance.

The remarks last made have reference principally to the exercises of young ladies, who are more likely to suffer in this respect, in our plans of education, than the other sex.

The necessity of cultivating the physical powers in young men, is sufficiently understood. The establishment of gymnasia through the country, promised, at one period, the opening of a new era in physical education. The exercises were pursued with ardor, so long as their novelty lasted; but, owing to not understanding their importance, or some defect in the institutions which adopted them, they have gradually been neglected and forgotten, at least in our vicinity. The benefits which resulted from these institutions, within my personal knowledge and experience, far transcended the most sanguine expectations. I have known many instances of protracted and distressing affections wholly removed; of weakly organized forms unfolded and invigorated, and of the attainment of extraordinary degrees of muscular energy and elasticity in persons in health.

The diversions of the gymnasium should constitute a regular part of the duties of all our colleges and seminaries of learning; and, to give them the requisite power of excitement, the system of rewards, so dangerous when mismanaged in literary education, might be introduced without any ill effect. Our young men may surely find time to cultivate those exercises, which Cicero and Caesar, and some of the most stu-

dious among the ancient and modern philosophers, considered necessary, and contrived to prosecute in the midst of their studies and affairs.

If the gymnasium is deserted because it calls for too much effort, let me intreat them at least to adopt a regular plan of walking. Two hours a day must be devoted to this business without relaxation, unless they are willing to carry the mark of disorder in the face while young, and a dyspeptic, nervous, disabled frame through that part of life, which requires health and activity.

Let those who are compelled to sedentary pursuits, seasonably lay aside one half of their ordinary food; and they will experience no loss of time in combating the horrors of dyspepsia.

The inhabitants of the Philadelphia Penitentiary, confined to a uniform regimen, which of course limits itself, enjoy uninterrupted health. Those who were diseased from bad habits before they became its tenants, are effectually cured after a short residence.

Regulation of the food is of primary consequence towards the formation of a good constitution. The most common error in relation to it, consists in the use of too much food. Nature has given us organs of a certain capacity, on the presumption that, being called on to manual labor, we should then require a large quantity of food. Muscular effort exhausts the strength, and requires renovation by nutritious substances; but when the muscular efforts are small, the quantity of nourishment



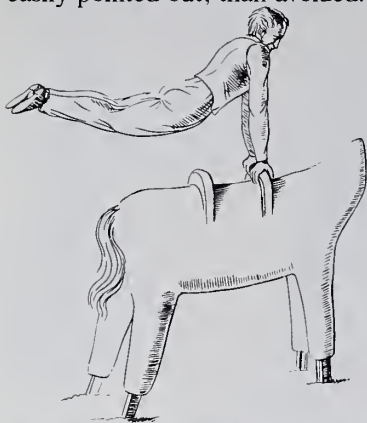
required is comparatively trifling; and if, in consequence of the capacity of the gastric organ, a large quantity is taken, the result will be pernicious, directly or indirectly. Parents are uneasy when their children eat but little, and would encourage them to eat against their inclination. No mistake can be more pernicious to health; and if persevered in, disease will infallibly result from it. When the child wants appetite, instead of being compelled to take food,



it must be compelled to take exercise, unless positively ill, and then it must be compelled to take medicine.

The quantity of liquid given to young persons is decidedly injurious. The principal agent in the digesting process, is a solvent juice. The more this is diluted with fluids, the weaker it is, and the less perfect the digestive action. Animal food should be sparingly taken by young persons who use little exercise; and children generally do not need it. Bread and milk, and fruit are the best articles for those who do not labor. Wine is highly pernicious to young persons. It is a slow but certain poison. Before the body has attained its full growth, there is an overplus of excitability; and if to this is added the powerful agency of wine, or any other stimulating drink, the constitution cannot fail to be hurt. Females are more injured by stimulating drinks than males, because their system is more susceptible of physical excitement. The nervous power is more energetic: the pulse and respiration are quicker; and the development of animal heat greater. Hence, I suppose it is, that they require less covering in cold weather; and suffer more inconvenience from the heat, than the other sex.

Females are unfortunately compelled by fashion to adopt partial and unequal coverings of the body. A part of the chest is very much covered, while another part is wholly exposed. The dangers which spring from fashion are more easily pointed out, than avoided. They



serve at least to place in a clearer light the necessity of inuring young females to exposure, and invigorating them by exercise.

There is one part of female dress, the dangers of which have been made known, but which still, I fear, continues to be practiced; I mean the girding the chest.

In what notions of beauty this practice took its origin, I am unable to discover. The angular projections formed by a tightly drawn cord, are in direct

opposition to the models of Grecian or Roman beauty. In the flowing robes of Juno, the Vesta and Diana, every part is light and graceful. Nor have I been able to discover, in the representation of the Muses or the Graces, any habili-ment which would lead us to believe they wore stays or corsets. The taste of the other sex is uniformly opposed to the wasp-like waist and the boarded chest. Yet, strange as it seems, there is scarcely a young lady of fifteen, who has not imbibed a disposition for this species of application, and scarcely a well dressed lady of any age, whose chest is not confined in such a manner as to impede the motions of respiration and the free use of the muscles of the upper extremities. It is true we are constantly told that they are uncomfortable without these appendages; but this only shows, what great inconveniences, we can, by habit, become accustomed to.

The Indian nations, who consider the flattened forehead to be a beauty, confine the heads of their infants between two piece of board corded together, and the child exists under this pressure, and may grow up. Yet there can be no doubt that diseases are generated by it; that some lose their lives and others their intellects. Still the fashion continues from age to age; for I have now in my possession flattened heads, which must have lived some hundreds of years since, and others which have belonged to individuals of the existing generation.

Nature has so contrived the human chest that there is no superfluous play of the parts composing it. Its movements are just sufficient to give such an expansion to the lungs and such an extent of oxygenation of the blood, as are adequate to the wants of the individual, under different occurrences. In females, the chest is shorter than in males; and to compensate for this, the motion of the ribs is naturally more extensive and more frequent. Whatever limits this motion is therefore peculiarly injurious to the sex; especially as they are more disposed to consumption and other chronic affections of the lungs.

Now the ligatures in the fashionable dress are placed precisely on that part, where the motion should be greatest; that is, the lower part. It is precisely here, that, in case of fracture of the ribs, when we desire to stop the movements of the chest, we apply a tight bandage;—though rarely do we venture to make it so tight as the ordinary corsets. The effect of such pressure, begun at an early period of life, will be understood from what has been stated in

regard to the spine. The bones must yield to it; their shape becomes permanently altered; the lower part of the breast contracted; the space destined by nature for the heart and lungs diminished; and what the fatal results of all this on these tender and vital organs are, every day's experience shows us.



Let me conclude by intreating your attention to a revision of the existing plans of education, in what relates to the preservation of health. Too much of the time of the better educated part of young persons, is, in my humble opinion, devoted to literary pursuits and sedentary occupations; and too little to the acquisition of the corporeal powers indispensable to make the former practically useful. If the present system does not undergo some change, I much apprehend we shall see a degenerate and sinking race, such as came to exist among the higher classes in France, before the revolution, and such as now deforms a large part of the noblest families in Spain; but if, as I trust it will, the spirit of improvement, so happily awakened, continue to animate those concerned in the formation of the young members of society, we shall soon be able, I doubt not, to exhibit an active, beautiful, and wise generation, of which the age may be proud. □

*John Collins Warren, MD was one of the foremost surgeons of his day and a co-founder of The New England Journal of Medicine. His father, John Warren, was Harvard's first professor of anatomy and surgery, a position to which John Collins was promoted after his father's death in 1815.*

Excerpted from a lecture delivered by John C. Warren, MD, professor of anatomy at the Medical School of Harvard University, on August 20, 1830 before the Convention of Teachers and Other Friends of Education, assembled to form the American Institute of Instruction. The complete text of the lecture was published in 1830 by Hilliard, Gray, Little and Wilkins.





# THE CRIMSON BIRTHMARK ON A HARVARD PRESIDENT

by John B. Mulliken

**N**o other president did so much to change and direct Harvard University as Charles W. Eliot during his 40-year tenure. He took special interest in upgrading the medical curriculum, and he played a pivotal role in moving the medical school from the Back Bay to the Longwood area. The quadrangle of neo-classical buildings and grassy enclosures was officially dedicated on September 25, 1906. President Eliot proudly pronounced the final consecration in the following words:

*I devote these buildings, and their successors in coming time, to the teaching of the medical and surgical arts which*

*combat disease and death, alleviate injuries, and defend and assure private and public health; and to the pursuit of the biological and medical sciences, on which depends all progress in the medical and surgical arts and in preventive medicine.*

*I solemnly dedicate them to the service of individual man and of human society, and invoke upon them the favor of men and blessing of God.*

As he spoke, no one could help but notice that the right side of President Eliot's face was distorted and colored a deep crimson hue.

Charles William Eliot was the third of five children, born on March 20, 1834 to a long-tailed patrician family

of Eliots and Lymans. The author Henry James describes that day in the house on Beacon Street across from the Common:

*His entrance upon the scene brought a shock to a family which was justified in expecting its men and women to be good-looking. The new child carried an ugly and unconcealable birth-mark, a swollen, liver-colored welt that occupied most of the right side of his face down to his mouth. It was impossible to overlook the naevus, or to see it and forget it*

It was said that Eliot's mother taught the boy that his vascular birthmark "was a cross which he must carry to his

grave and which he must bear manfully." Looking back on his childhood, Eliot said those days were "not as rich and bright as later days . . . are we not to forget how vivid and real are the pains, griefs and fears of childhood." There are stories of young Eliot's problems playing with the North End boys on the Common. According to an elder cousin, he was once "hooted off the Boston Common because of his face." Undoubtedly, the birthmark contributed to Eliot's natural shyness and made him feel more comfortable with those he knew well; he had only a few boyhood pals outside the family circle. Years later Francis G. Peabody, Eliot's brother-in-law, recalled a time when young Eliot alluded to his vascular anomaly. Apparently his grandfather had given him a special gift of money and when Peabody asked why, Eliot replied "Because of this," pointing to the right side of his face.

His parents emphasized that it was not one's appearance but what one did that mattered. Throughout his life Eliot was fond of quoting the precepts of the Unitarian minister and author Edward Everett Hale: "Look forward and not backward—look out and not in." In the beginning Eliot found little pleasure in attending the rigorous Boston Latin School. In time, he discovered the ancient poets and found joy in oratory. At graduation he delivered the salutatory address in Latin. His successful declamations suggest he was overcoming his sensitivity. By age 15, Eliot was ready for Harvard College.

The undergraduate Eliot was not

well known by his classmates. He was introverted, bookish, and his scholarly habits carried him into the top four of his class by his junior year. Eliot was a high myope, a handicap in being unable to recognize his classmates across the Yard—just one more cross to bear. During his junior year, his eyes failed and he had to have his textbooks read aloud to him. This is a rather curious happening, unlikely in someone who is merely nearsighted. Eliot's port-wine stain was localized to the second trigeminal division, and therefore it is unlikely he suffered with the ophthalmic complications of Sturge-Weber syndrome. Moreover this was a transient and bilateral amblyopia. It is more likely that Eliot had a central or macular loss of vision secondary to bilateral optic neuritis. This temporary amblyopia had its compensation in the camaraderie generated from having his classmates help with his studies.

In his junior year, Eliot came under the care of the redoubtable Henry J. Bigelow, MD, who tried to treat the vascular malformation. In a letter written years later to Bigelow's son, Eliot recalled:

*He wanted to try an experiment on the naevus on my face, having read of successful operations by a Viennese surgeon on similar blotches. I was glad to have the experiment tried, but was much surprised to discover that our father did not know how to make the powerful freezing mixture which was required. He did not know the difference between chloride of lime and calcium chloride. The experiment failed, though pushed*

*to a point beyond which your father said he did not dare to go.*

Eliot continued to room alone, living in Number 15 Hollis his senior year. Yet there were signs of his increasing sociability. In a letter to his friend Theodore Tebbets that March, he told of being elected president of his literary fraternity and remarked:

*You won't understand the first doubtful attempts of a stiff, pokerish, glum, unattractive young man, who is just waking up to the great truth that the proper study and the true happiness of mankind is to be found in intercourse with man, and I may add, woman.*

Eliot graduated second in his class of 88 students; a photograph of a handsome young man appeared in the Harvard Class of 1853 album. The poignancy of this photograph is appreciated only when it is compared with another taken in the fall of 1854, after Eliot was appointed tutor in mathematics. Note that in the 1853 photograph, the part in Eliot's hair is on the opposite side and his shirt buttons are incorrectly placed. The sensitive Eliot had his class photograph printed in reverse so as to hide the right side of his face.

Eliot's academic career was off to a good start. In 1858 the college made him assistant professor in mathematics and chemistry, and in October of that year he married Ellen Peabody, daughter of the minister of King's Chapel. In 1863, failing to secure promotion and declining the governor's offer to appoint him a Union cavalry officer, Eliot and his family, including two young children, were off to Europe. There he would dabble in chemistry and primarily concentrate on the organization of the continental educational systems. He preferred Paris to London; he was uncomfortable in England where his port-wine stain was constantly stared at.

In 1865, after two years abroad, Eliot returned home to become professor of analytical chemistry in the newly established "Boston Tech" (later to become the Massachusetts Institute of Technology). In the spring of 1869, the Harvard Corporation voted to offer Eliot the presidency; he was only 35. In a touching account in the diary of his cousin, Theodore Lyman, Eliot asked for advice on whether or not to accept the position. He wondered whether his facial birthmark might detract from the dignity of such a public office. After some opposition, his election was confirmed on May 19, 1869; the news came to Eliot alone, for his wife had died just a few weeks before.

Eliot had a keen interest in physical



At left is Eliot's Harvard Class of 1853 photo, flopped in print to hide the right side of his face; at right is a photo taken when he was appointed tutor in mathematics in 1854.



fitness. He was an oarsman at the college and throughout his life was fond of long walks, horseback riding, bicycling and yachting. According to one biographer, Eliot's facial birthmark "only served to heighten the total impression created by his bodily vigor, tall and erect figure, resonant voice and strong, clean-cut features." Yet whenever photographed, Eliot would turn his head so as to hide the port-wine stain from the camera. This strong left profile would forever be the public view of Eliot; all the official portraits, throughout his 40-year presidency would be from that side. Only after his retirement did candid photographs catch him full face, e.g., when visiting Keio University in Japan or at the celebration of his 90th birthday. Yet, even in these later years, his grandson recalls, the elder Eliot always remained self-conscious about the birthmark.

Perhaps Charles W. Eliot's vascular birthmark caused him to be particularly interested in medical education. In 1869 he was the first president to take his place at a medical faculty meeting. He was the driving force in upgrading the medical school's admission and curriculum standards; he was determined that it would not be a vocational school. Eliot took the school out of the clutches of the private practitioners and placed it into the hands of the university. The "Eliot Index" became the criterion whereby a medical school might qualify as a university department. Simply stated, it was the ratio between the educational opportunities a faculty spread before its students, Eliot's beloved 'elective system', and the sequence of courses that can be encompassed by an average student in four years.

Eliot felt that no department of a university can grow under the restriction that it shall teach no more than a fair student can learn. As a result of Eliot's prodding, after 1892 the medical school required four year's attendance and finally, by 1900, an undergraduate degree was necessary for admission. Eliot's reforms carried the day against conservative opposition led by Oliver Wendell Holmes and Henry J. Bigelow.

In October 1877, Eliot remarried. His new wife was Grace Mellon Hopkinson. Her nephew, Charles Hopkinson, was an artist and Harvard man (AB degree, 1891). Hopkinson made a specialty of painting educators and many colleges possess his works. The Hopkinson and Eliot families were very close, often summering together at Northeast Harbor, Mt. Desert Island, Maine. It is not surprising that the artist-in-law was able to intimately portray



*Eliot (standing on first step) shown full-face when he visited Keio University in Japan.*

the retired president. The Hopkinson painting of 1909, which hangs over the staircase of Building A, clearly shows the port-wine stain, although it is in a shadow.

Interestingly, the portraits of Eliot by the collector-artist Denman W. Ross of the same year and the John Singer Sargent portrait of 1907 still depict Eliot's face turned to his right, hiding

the birthmark. By the time Eliot was 90, Hopkinson was able to portray him in unabashed full-face. Hopkinson was known for his unusual techniques and this painting artfully disguises the vascular stain on the right cheek. However, it is impossible to turn from the sculptor's eye, and the numerous busts of Eliot by Lewis Potter clearly demonstrate the asymmetry and droop of President Eliot's face.

The vascular malformation on President Charles Eliot's right cheek caused psychosocial problems during his childhood. Nevertheless, with the support of his family and by strength of character, he was able to overcome this handicap and grow from a shy boy to a leader of men. He was a man distinguished by remarkable qualities of integrity, joy in hard work, and talent for organization. A full and successful life of service to Harvard would have accrued, even if her most influential president did not have a port-wine birthmark. □

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*Eliot addresses the crowd at the dedication of HMS on September 25, 1906. (Photo courtesy of Countway Library.)*



# The Travel Program Of Alumni Flights Abroad



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